RAILROAD MAGAZINE

25¢

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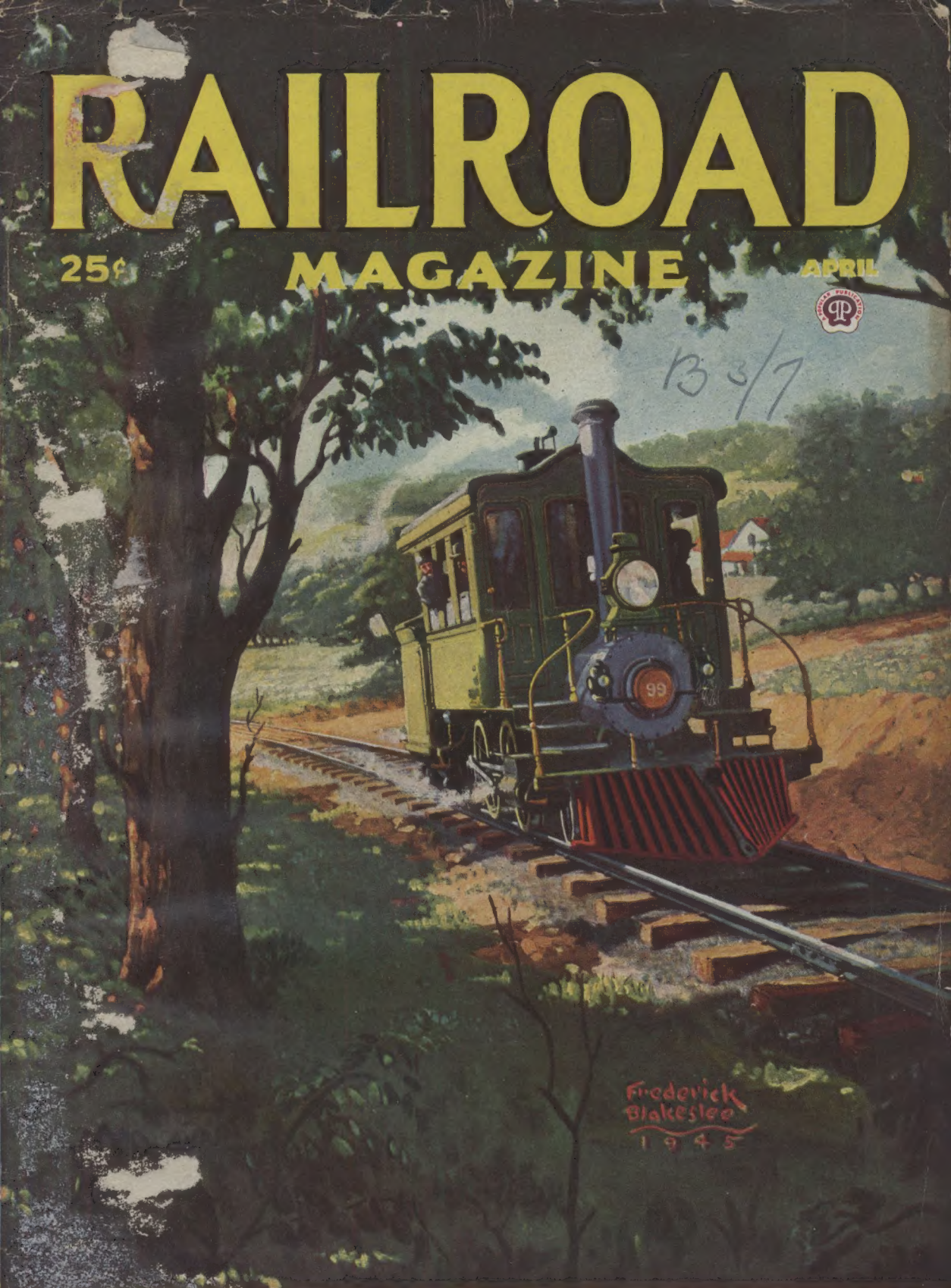

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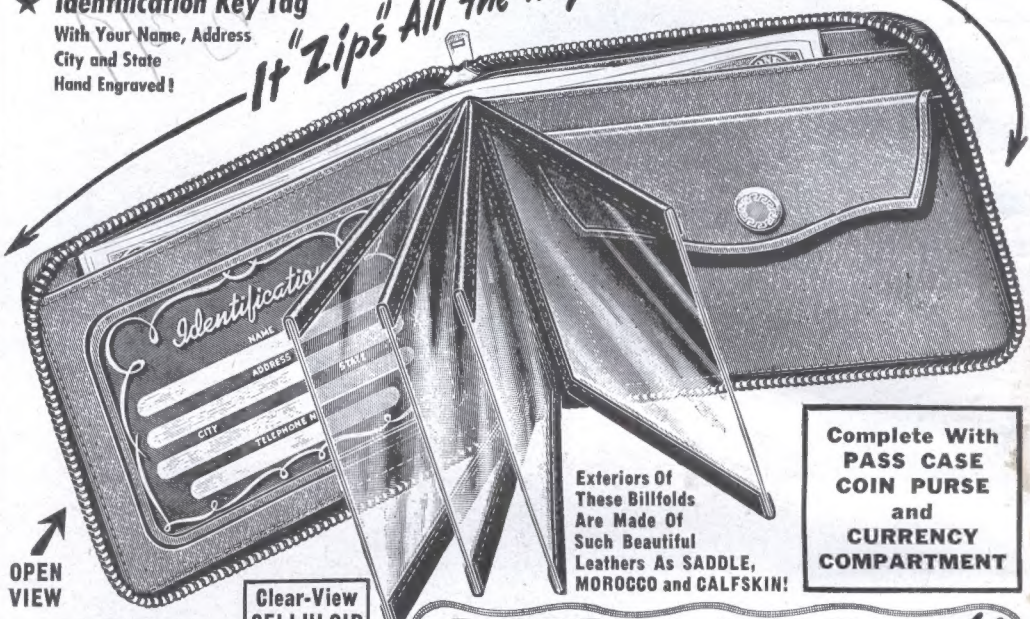

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After the last war, between 1920 and 1930, the railroads spent more than four billion dollars for improvements on these "highways," and in addition more than three-and-a-half billion dollars for betterments in equipment. After this war, a similar program will be required.

So there's another highway program which could make a lot of postwar jobs, and which needs no more than a public policy of treating all forms of commercial transportation alike—letting each one pay its own way, which includes the payment of the general taxes upon which governmental services depend.

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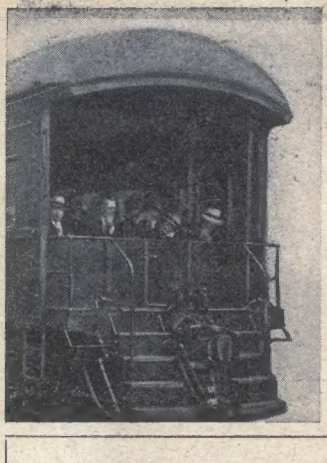

RAILROAD MAGAZINE

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Henry B. Comstock, *Editor* **Freeman H. Hubbard,** *Research Editor*

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Less Than Carload Lots

ROADBED of the abandoned Welsh Highland Railway in Wales will be converted into a public walking route if plans of the Ramblers' Association of that country are carried out. The Caernarvonshire County Council has expressed itself as favoring this project, the financing of which calls for public donations totaling about $10,000. It is not uncommon for a railroad right-of-way to be rebuilt into a motor highway, but this is the first case brought to our attention in which an abandoned railroad may prove to be a hikers' paradise.

* * *

GROCERIES. If the Union Pacific could buy all the food it needed for the whole year for its dining-car and hotel department by putting through one telephone call, that call would sound like this, judging from last year's figures:

"Hello! This is the Union Pacific. Send us 56,000,000 eggs, 183,000 pounds of fresh beef, 246,000 pounds of ham, 132,000 pounds of fresh pork and 81,000 pounds of butter."

The list would go on to include 31,200 cases of California oranges, 374,000 heads of lettuce, 1,458,000 bottles of milk, 140,000 quarts of cream, and a long parade of other items sufficient to prepare 23 million meals. A total of 2,300 Union Pacific employes are engaged in preparing and serving these meals, the bulk of which are being consumed by men in the armed forces.

FORGOT SOMETHING. It was 5:59½ p.m. and the streamliner *City of San Francisco* was about to pull out of the North Western station at Chicago, according to the *Chicago Tribune*, when a staff sergeant weighing about 250 pounds bounced out of it and sprinted down the platform toward the gates, knocking people this way and that, shouting at trainmen:

"I've forgotten something."

He plunged through the gates and into the waiting-room, where he looked wildly for a brief moment. Then he scooped up a six-months-old baby from a bench and sprinted back to the gates. He made it down the platform in nothing flat, yelling:

"Much obliged! Much obliged!"

Then, with one magnificent leap, he clambered into the nearest open door, and the train began to roll.

* * *

INGENUITY often has to be called into play by railway express men in handling animal travelers. Recently, nine mink and a raccoon arrived at Montreal in the express car of the *Maple Leaf*, Canadian National train, enroute from Fergus, Ont., to Labrador. The little beasts were to continue their journey from Montreal by boat; but none was available at that time, so the express men had to find temporary accommodations for the creatures in keeping with their natural environment till the next sailing for Labrador. This problem was solved by sending them to the suburban farm of Dr. Baker, a veterinarian, on Cote de Liesse Road.

* * *

DONEGAN, in rail lingo, means "car converted into stationary living quarters." It originated on the Jersey Central about 1900. Three Irishmen of that name—a boss carpenter in Jersey City, two car foremen at Elizabethport, N. J.—occupied shacks in CNJ yards. Visitors seeking the Donegans would be referred to the shacks. Thus the buildings themselves took on the name. Later, converted boxcars replaced them, but the term stuck and gradually came into wider use.

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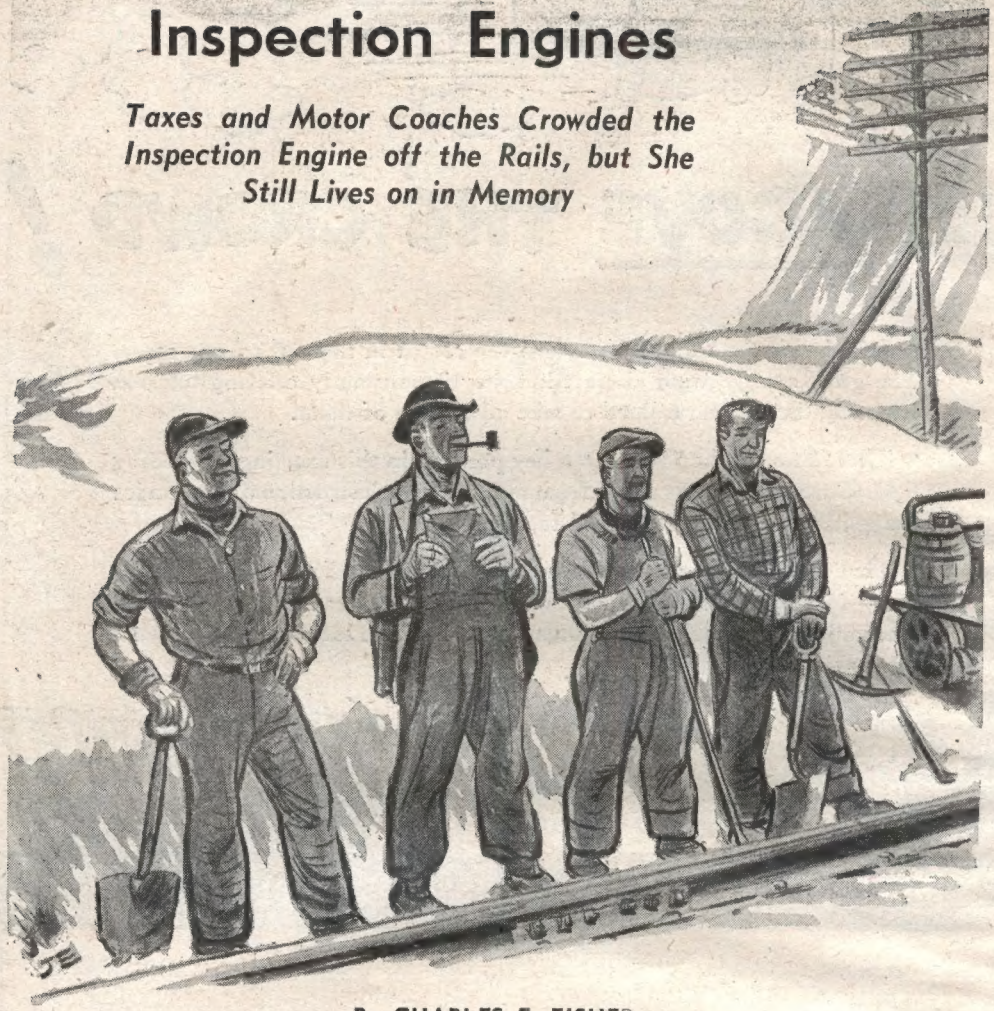
Inspection Engines

Taxes and Motor Coaches Crowded the Inspection Engine off the Rails, but She Still Lives on in Memory



By CHARLES E. FISHER
President, Railway & Locomotive Historical Society, Inc.

BRASS HATS have little liking for non-revenue equipment. Work trains and wrecking cranes, instruction cars and the section scooter—there are liabilities on the books, frowned upon as necessary evils.

But even the officials have their sentimental side and three-quarters of a century ago we find them clattering over the rails in what was certainly the least versatile and at the same time one of the most costly mechanical deadheads ever to leave an erecting shop. This was the picturesque inspection engine, used for periodic excursions over a division, or divisions, to acquaint a superintendent or master mechanic with his domain.

Who invented, devised, concocted or constructed the first inspection locomotive in this country, it seems impossible to say. Engine rosters of the various lines are of no value, for the date assigned to such a machine

may apply to the original construction job, time of conversion from a conventional engine, or reboilering period.

We know that track inspection is as old as the iron trails themselves. Back on October 1st, 1839, the Western Railroad (now Boston & Albany) was opened from Worcester to Springfield, Mass. It was an important moment in the history of the Commonwealth. Yet records show that the so-called "first run" was purely nominal. For, several days previously, an inspection train, consisting of open platform cars pushed by a locomotive, was operated over the road. In addition to carrying prominent transportation officials it bore certain representatives from the State House. Massachusetts, which had advanced several million dollars to the corporation, intended to see that its money was securely nailed down.

Nor were flatcars the only points of vantage for such excursions. When rail connections between Baltimore and St. Louis were completed in 1857, a special Baltimore & Ohio train was run over the route by way of celebration. Three fine old photographs of the day, all taken at the same time and place, show a Tyson

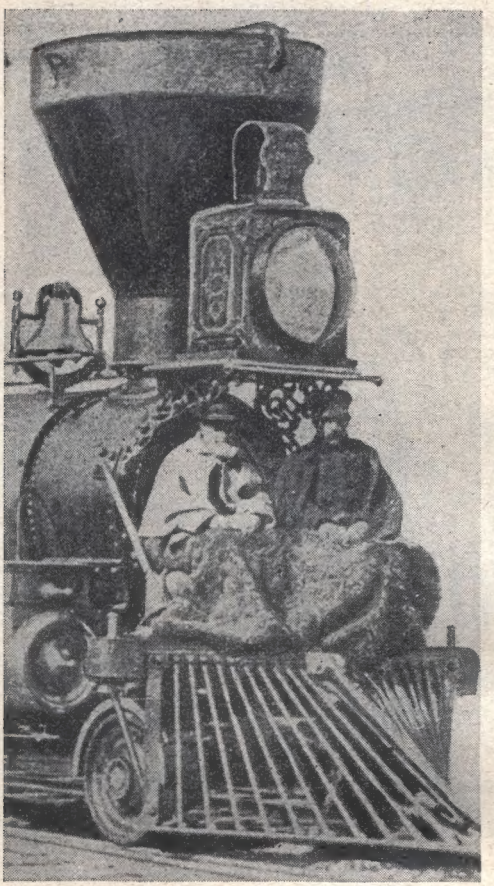


Photo from collection of D. L. Joslyn

MEMBERS of the California Railroad Commission inspected Central Pacific trackage from Sacramento to the state line on the pilot of the *Falcon*, back in 1869

ten-wheeler—one of the engines used—with its pilot and running boards crowded with passengers in festive attire.* It seems highly unlikely that these excursionists, and more particularly the three young ladies seated beneath the huge oil headlight, spent any great amount of time observing the track from this gusty perch.

We do know, however, that in 1869 two members of the California Railroad Commission rode from Sacramento to the state line on the pilot deck of the Central Pacific's Number 113, the *Falcon*, to see that certain requirements had been met in the construction of this section of our first "transcontinental" railroad. A remarkable old photo reproduced here, pictures the two dignitaries hunched up against the smokebox front and protected by what appears to be a buffalo robe. I have always admired the commissioners for their hardihood and wisdom in selecting such a grandstand seat.

BUT THE DIGNITY of certain other officials did not permit them to travel in so crude a fashion. The Pennsylvania Railroad appears to have been the first American line to provide itself with real inspection equipment. In 1864 its Altoona shops took a Baldwin engine which had been built three years previously and extended its frame to support the front end of a small passenger car. The rear portion, in turn, was carried upon an ordinary four-wheeled truck. This curious hybrid did service for a number of years, frequently hauling a photographer's car from which numerous scenic and stereoscope views were made for the pleasure and amazement of our grandparents. In time the job was cut apart and the car section transferred to the running gear of a four-wheeled caboose. This allowed the engine to go its own way when not engaged in inspection work.

Nevertheless the Pennsylvania soon recognized the advantage of unobstructed vision forward, and built a number of curious cars with tiers of transverse seats, placed one row behind and above another. It must have been pleasant, on a warm spring day, to sit in one of these traveling

**One of these prints appeared in color on the cover of April, 1940 Railroad Magazine.*

grandstands while a chuckling eight-wheeler nosed her out of the Canoe Valley and up around the broad toe of the Horseshoe Curve. It is interesting to note that PRR never abandoned this form of inspection car for the more common cab-over-engine type which found favor on other roads.

These last had their origin in the late Sixties. Oddly enough, one of the first to be designed was built for export. Named *La Joya* (The Jewel) she was purchased by the Mejia & Arequippa Railway of Peru from the Rogers Locomotive & Machine Works, of Paterson, N. J., in July, 1869. Examination of her photograph shows a convenient arrangement of seats on either side of an upright boiler. Due to the mild climate in which she was to operate, no protection was needed, other than an awning.

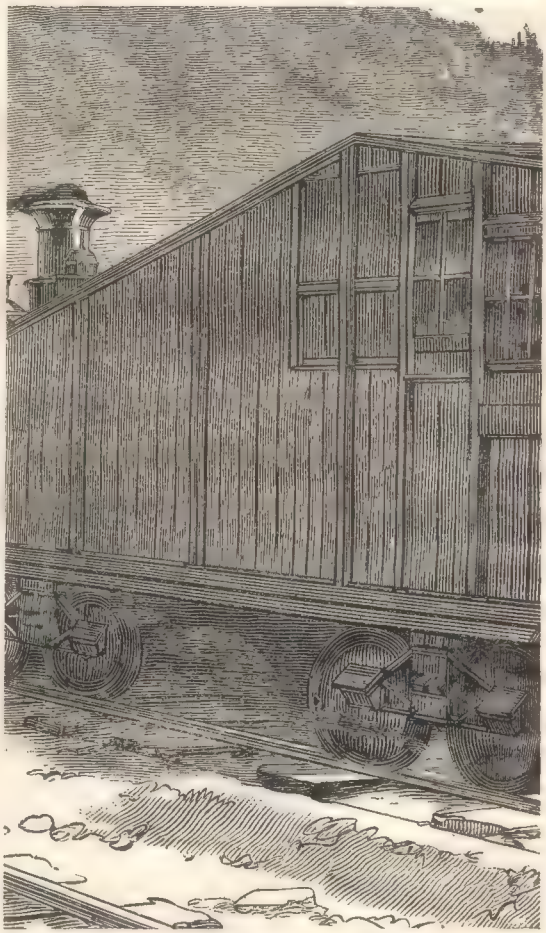
The 1883 edition of *Recent Locomotives,* published by the Railroad Gazette, contains a brief description of another four-wheeled inspection engine of a type hardly longer than a handcar, which proved quite popular on some of our smaller roads. Designed and constructed by M. M. Buck & Company, of St. Louis, Mo., in 1876, it was incontestably stated to be more economical than a locomotive with a superintendent's car attached. The power plant was a forty-two by eighteen-inch upright

Old print from collection of C. L. Winey

MRS. ROOSEVELT? Guess again. It's the Governor General of Canada and family, crossing the crest of the Rookies on an early CP train. Any indication of locomotive valve motion is a figment of the reader's imagination

boiler, carrying one hundred and forty pounds' steam pressure and feeding three and one-half by six-inch cylinders. The frame was supported on rubber springs above the axle bearings, with the platform itself extended beneath them, so that it skimmed along a scant ten inches above the rails. Two reversible seats were provided, one in front of, and another behind, the boiler. Each accommodated three passengers. Enough water for a forty-mile run (about a barrel) was carried in a storage tank beneath one cushion, and a coal supply sufficient for a day's operation could be stowed away in the deck hopper.

ABOUT this time, too, full-grown and self-contained units of the so-called "bicycle" type appeared. These had two drivers, with varying arrangements of leading and trailing wheels, and cabs that were masterpieces of the coach builder's art. New York, New Haven & Hartford's *Transit*; Philadelphia & Reading's *Black Diamond*; Lackawanna's *Cricket;* Erie & Wyoming Valley's Number 40; and Lehigh Valley's *Dorothy,* illustrate the trend.

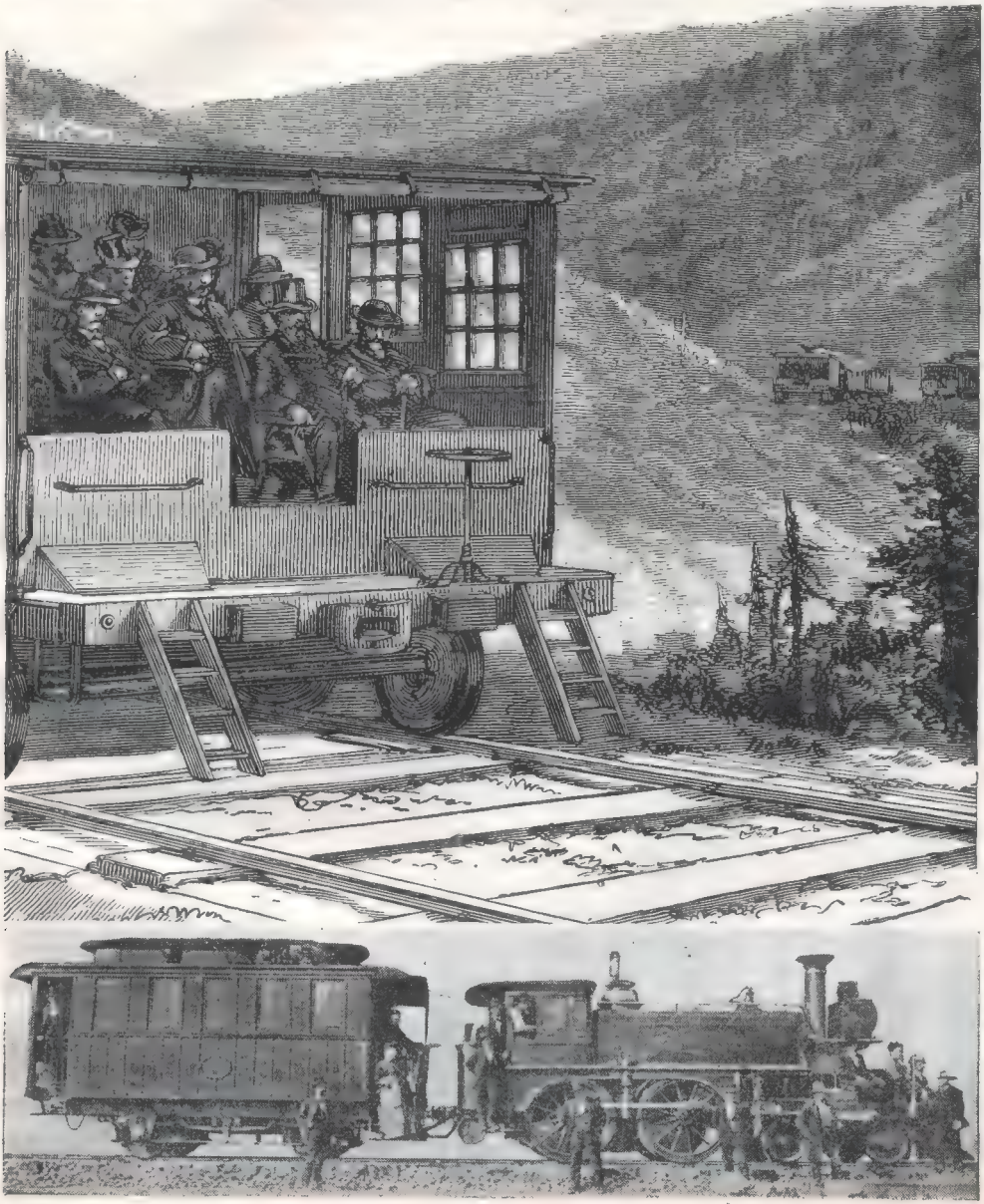


Photos from Railroadians of America

NEAREST thing to an inspection engine the PRR ever had was the odd little combination coach and eight-wheeler pictured at the top of this page. It was later sawed apart and the car section placed upon a caboose truck (shown at right). Since then the road has favored "grandstand" coaches, ranging from the crude wooden type illustrated above to all-steel equipment

The *Dorothy,* incidentally, was a great favorite among officials who had occasion to peer through her crystal-clear windows at the varied but ever beautiful countryside that has made the "Valley" famous as a scenic route. Of the 4-2-4 type, she had been built at Wilkes-Barre, Pa., shops in 1884, and bore the number 300 until she became the One-spot under the 1905 classification system. For half a century *Dorothy* nosed up and down the main wayside branches. And then, in 1934, word came that she was being retired.

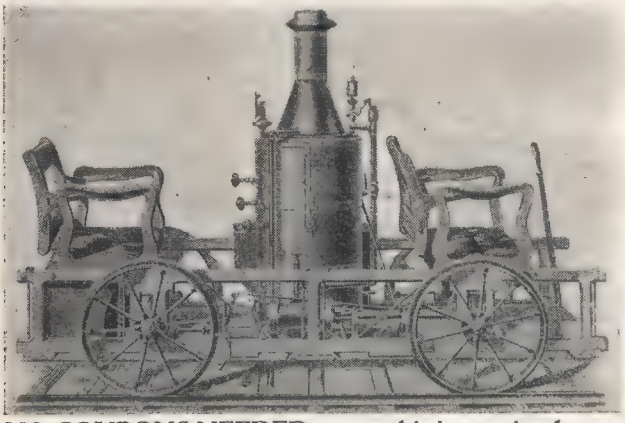
It was then that John B. Vaughan, of Kingston, Pa., spoke up. Mr. Vaughan was a coal-mine owner with a passion for railroading. He knew the little thirty-nine-ton locomotive



well and hurried down to Sayre to make an offer for her. When he returned he had not only the engine but enough rail for six hundred feet of track. A roadway was at once laid out upon his property and there, on a pleasant Saturday or Sunday, *Dorothy* could be found wheezing away at a rate of three hundred and twenty exhausts per round trip.

Unfortunately her new owner lived only a few years to enjoy his hobby. After his death the engine was presented to Superintendent Mitten, of the Lehigh Valley, who removed *Dorothy* to his summer home at Bear Creek, Pa. Here, according to last reports, she still remains upon a spur of a now abandoned branch line, alone among the firs.

More common than the inspection locomotive built from scratch, was the rebuilt unit. In the middle Seventies and early Eighties many of our roads had a wealth of light power that was being displaced by heavier types. Around the forward ends of these machines a number of lines built abbreviated cabs which afforded excellent vantage points from which to view the track ahead in comfort. One such shelter, known as the Haskell design, had a curved glass window extending downward from a monitor roof to within nine inches of the pilot deck. An air-brake cock and a whistle signal were placed within the cubicle to inspire confidence among the six observers who could be "comfortably accommodated on the leather lounge and chairs within." Yet they probably found more reassurance in the two large doors which swung outward on well oiled hinges, one on either side of the cab, to permit a speedy exit in the face of an impending collision. Among the very few Midwestern roads which adopted the inspection engine, the Chicago & West Michigan and the Chicago, Burlington & Quincy both ran locomotives of this type.



NO COUPONS NEEDED to run this inspection buggy of 1876. She burned seventy-five cents' worth of coal a day, hit a top speed of thirty miles an hour

BUT it was the altered road locomotive with a full-size coach body mounted over the boiler which we may consider as the conventional inspection engine. All of these—and there were many—followed a general pattern, regardless of the wheel arrangement, which might range from a 2-6-0 to a 4-4-2, with 4-4-0s in the majority. Almost always the car interior was partitioned off in such a way that the engineer and fireman occupied a space equal to that of an ordinary cab, while the larger, forward compartment, reached by staircases from the pilot, housed the traveling officials. The enclosure was frequently finished in black walnut or mahogany, with wood lagging used to dress up the boiler

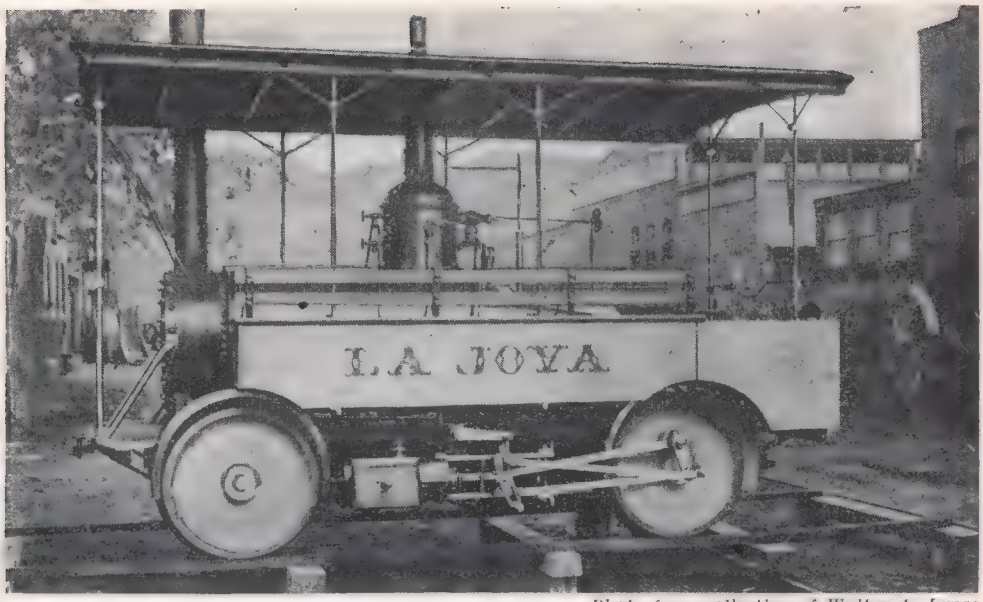


Photo from collection of Walter A. Lucas

ENCREASE P. GOULD, South American representative for the Rogers Locomotive & Machine Works, wrangled 1869 order for inspection engine ***La Joya*** from the Mesia & Arequippa Railway of Peru. Note outside link motion

top, which came barely through the platform. Comfortable chairs were ranged along both sets of side windows. The view ahead was as nearly unobstructed as door frames and the engine stack would allow. One road, the New York, Ontario & Western, obligingly split the chimney, to allow full vision through a center window. Brass work (not infrequently including the stack) and nickel plate were very much in evidence. All of this metal had to be bright and shining when the locomotive went out with a party of officials.

The crews assigned to such runs were the pick of the roster and generally had only to ask for a change in these engines and it was granted by the master mechanic—sometimes to the discomfiture of the roundhouse foreman. Take the case of Harry Grant and the USRA whistle. For many years Harry had handled the New Haven's inspection engine *Naugatuck,* and he was mighty proud of her. And then one day in 1920 he heard the pleasing chime blast of a new 4-8-2; one of the R-1a engines which was being delivered to the road by Schenectady. Harry pricked up his ears and decided it sounded better than the quill on the *"Naugy."* A word with Mr. Bardo did the trick. Down to Cedar Hill the inspection engine steamed, to effect an exchange with the big R-1a. Buffed and polished, the new whistle may have looked a trifle large on Harry's locomotive, but her voice was much improved.

This passion for distinguished appearance and performance carried over into allied engine services. I have already stated that the Pennsylvania used no inspection locomotives. It did, however, designate certain locomotives to handle the special trains of its brass hats. For years Number 937 was assigned to

AT LEFT: Inspection locomotive *Transit*, built at New Haven shops in 1871, had 6¾x10-inch cylinders, which turned 42-inch drivers
Photo from collection of the Author

BELOW: Lehigh Valley's *Dorothy*, as she looked when mine-owner John B. Vaughan was operating her on his estate at Kingston, Pa. Originally she had spidery pilot and a silver bell mounted below her flamboyant oil headlight
Photo from Railroadians of America

the president. 317 was the official engine on the New Jersey Division and, if I recall correctly, the 1002 was kept at Altoona for a similar purpose. Of the lot, the first was easily the most distinguished. A Class D-16b eight-wheeler, she had been turned out at the Juniata Shops in 1906. The late Erskine S. Davis, who before his retirement was foreman painter at West Philadelphia, delighted in recalling how his design for her color scheme and striping won over all others submitted by his fellow foremen. Once seen, the quality of this work, combined with the blue of her Russian iron jacket and high-pitched, silvery toned bell, could never be forgotten.

WILLIAM H. VANDERBILT of the New York Central, and his son-in-law, Dr. W. S. Webb, had a kindred passion for fancy inspection engines. Dr. Webb, the guiding light of the St. Lawrence & Adirondack Railway, had a 2-4-6 type built for his personal use by the Schenectady Locomotive Works in February, 1892. Named *St. Lawrence*, she proved too small for his parties and four years later she was sold to the Central Vermont, which road rebuilt her as a 4-4-0 type and numbered her the 109. At about the same time (1896) Dr. Webb ordered a still larger engine of the 4-4-0 type, having an independent tender. The name *Ne-ha-sa-ne*, which she bore at the period of her building, was retained when the New York Central absorbed the StL&A. Records show that she

was the last of the Central's great inspection fleet to be retired (1935).

Vanderbilt's system actually had a total of twelve such motive power units built or converted between 1889 and 1908. In addition to the *Ne-ha-sa-ne*, they were the *Corning* (1889-1929), the *Ontario* (1889-1920), the *Mohawk* (1892-1925), the *Pittsburgh* (1893-1925), the *Niagara* (1896-1928), the *Catskill* (1897-1925), the *Buffalo* (1903-1922), the *Hudson* (1903-1929), the *Berkshire* (1903-1931), the *Chicago* (1905-1934), and the *Cleveland* (1908-1930). Of these all but the *Corning, Hudson* and *Berkshire* were originally constructed as inspection engines. *Berkshire* was a B&A product; *Buffalo* and *Cleveland* served the Lake Shore & Michigan Southern. The latter, incidentally, was the only one of the entire lot to be reconverted into a conventional locomotive.

AMONG RAILROAD MEN who remember the New York Central's inspection engines very well is Conductor John Johns, who was flagman on one of the Hudson's periodic trips over his division.

To understand the purpose of these engines, John explains, you have to realize that oldtime railroading did not follow the highly centralized departmental system in use today. Back then, on most roads, a division superintendent was a personage to be reckoned with. He was all that the name implies and then some. *He was the boss.*

ABOVE: Philadelphia & Reading Coal & Iron Company's ***Black Diamond*** was a familiar sight on all parts of the system for many years

Photo by Gordon C. Berg, Gibraltar, Pa.

RIGHT: Another "Bicycle" type on the Lehigh Valley—the ***Cricket.*** She was far more complicated, difficult to operate and limited in seating capacity than the small motor coach of today

Photo from Railroadians of America

YEARS before the New York Central acquired its fleet of named inspection engines, the road pioneered in developing this form of power. Here's the 513, complete to "pulpit" for the division superintendent, as she looked soon after outshopping in 1876

Roadmasters, paymasters, and motive power men were assigned to each division, all under the jurisdiction of the superintendent who, in turn, was entirely responsible for the smooth operation of track assigned him. When he wanted anything done, from changing the location of a switch to the altering of train schedules, he simply went ahead and issued an order. As a result he led a busy life and spent considerable time on the road, trusting to find inspiration there for changes which would improve his charge. Over a period of time he came in intimate contact with every phase of railroading and, I daresay, knew his men personally.

To conduct his excursions an inspection engine was bequeathed to each superintendent, for better or for worse. Every time he went out on the road thereafter the expense of a special train was saved. In one load the boss would gather his lesser lights together and jaunt merrily over his domain. When he saw something he did not like he would stop and order the desired changes. Track, stations or bridges—it made no difference. There was no red tape; no endless writing to a centralized department asking for alterations. Blowing off steam while it waited, the inspection engine did not move on until the superintendent was certain that his demands were understood and practically carried out.

My impression of the locomotives themselves is vivid. They looked like something dropped out of a nightmare. Try to imagine an American type with an old open-platform coach sitting astride it. The front was the passenger section, and the rear, with a wooden partition dividing it, the operating end. Brass hats, of course, rode up forward on the cushions, while the engine crew had the cab to themselves. And cab it was, in every internal detail. The tallowpot had a chain-door firebox to contend with, and shoveled coal from a regulation tender.

The inspection end resembled the interior of a standard day coach. Boiler and steam and sand domes, partly concealed under wads of insulation, took up the center space, or what would have been the aisle of an ordinary coach. The floor was covered with green carpeting about the same color, design and texture as that used in a conventional Pullman.

Regardless of the weather, the heavy insulation made it necessary to equip the compartment with steam heat. And of course in summer the windows could be lowered. But there was always a dead, stuffy air about the interior, like that of an old room that hasn't been opened for months. Bad air or not, though, it was snug in cold weather, and comfortable.

Inspection engines, when in tiptop shape, rode smoothly enough. With the chief brass hat and his gang aboard, they had to. Besides, they never traveled at any great speed. If they had it wouldn't have been an inspection trip. Moving along at fifteen or twenty miles an hour, the engineer was always ready to stop at a moment's notice. If he was twisting her tail he would overshoot the mark and that meant backing up.

Then there was another factor to consider. That was the risk of main rods snapping, a not uncommon form of accident in those days, when engines were run at high speed.

With a conventional locomotive the havoc wrought by a flaying rod was bad enough. But you can well imagine how much worse it would have been in the case of the inspection locomotive, which carried its passengers directly above the wheels. No; when the superintendent wanted speed he preferred to call out a special. The same went for extended trips, where eating and sleeping facilities had to be considered. In the latter case, though, it was not unusual to couple one or more cars onto the rear of the inspection engine itself. To the best of my knowledge only one such locomotive could handle a longer train with ease. That was the Philadelphia & Reading's Number 100, an Atlantic type built in the Reading shops in 1913. She had eighteen by twenty-four inch cylinders, sixty-eight inch drivers, and a total engine weight of 160,770 pounds! In appearance, too, she was without a peer.

I'LL NEVER FORGET the trip I made as flagman on the old *Hudson*, Johns recalls. A new superintendent had been appointed to my division—a jovial old fellow who had come up through the ranks. With his round face and pleasant manner he appeared for all the world like a country doctor, rather than a stern division superintendent.

At that time, we had the departmental system partially in force, and this run was called to show the new boss his division and to have him meet the men. With due regard for formalities—the super sat up front, while his lesser lights occupied seats progressively farther back as their status dropped—we highballed out of West 72nd St., New York, on this half good will—half inspection run.

A very unusual operating situation existed in those days, as you proceeded along the river. From the point just mentioned, the Hudson Division ran northward ten miles to

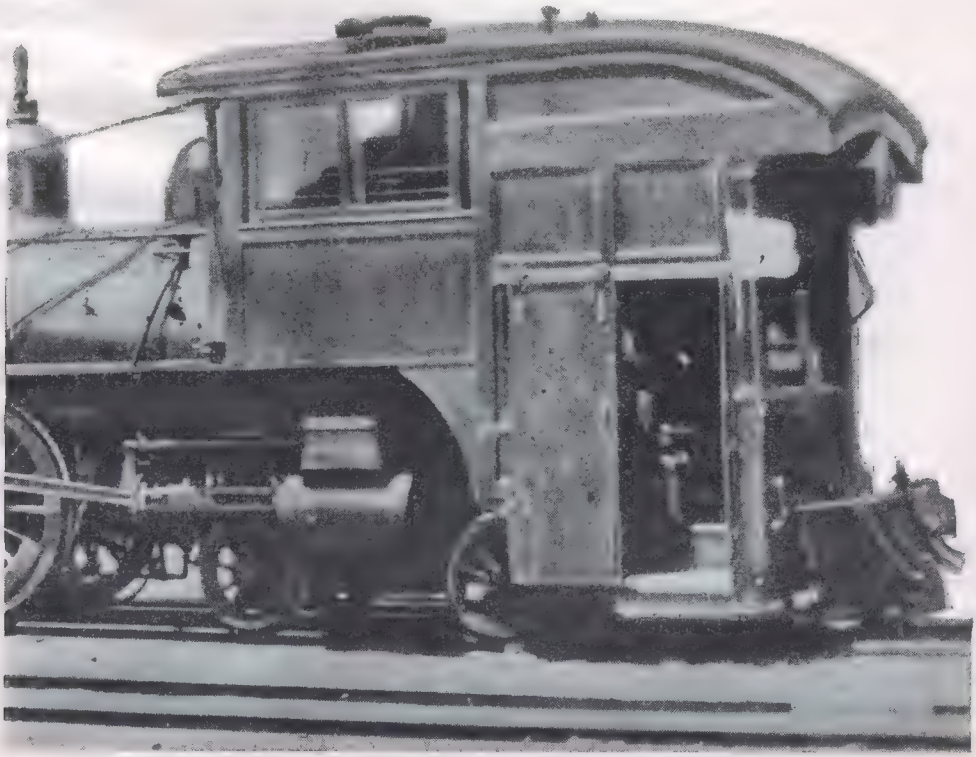
STYLED for close-up inspection of head-end collisions. She's the CB&Q's 360

Spuyten Duyvil, at the upper tip of Manhattan Island. There it met the Electric Division, which continued twenty-two miles on to Croton-on-Hudson, where the Hudson Division picked up again and extended to Rennselaer, across the river from Albany. (Years later third rail was laid along the west side line and its trackage became a part of the Electric Division.)

It was a fine October day that the superintendent had picked for his excursion. Across the way the Palisades were half hidden in foliage that had turned a thousand colors overnight. Our island skirting tracks were not covered then, and we paralleled fashionable Riverside Drive under a bright sun.

At one time a regular engine-crew had been assigned to each inspection locomotive. When they weren't out with it they ran the monthly pay-car. But things had changed and on the day in question a crew from the extra passenger list was called for the run. I don't remember the engineer's name, but he was an Irishman and a good runner. Also he had a quick and violent temper. Both he and the fireman were now grumbling at what they called a rotten break, declaring they would be out all day and lose money.

We paused at Spuyten Duyvil while the small-fry brass hats pointed out to the boss the spot where his division joined the Electric. Then, after considerable yessing, the *Hudson* got under way again. Like a load of aliens on foreign soil, the brass hats maintained silence while we traveled over the Electric Division. I was riding the left hand side of the cab, on the four inches of seat



space allotted me by the bakehead. For that accommodation it was my business to take water, push coal ahead and in other ways assist the fireman. We had no conductor and no other trainmen. I was the only one. The trainmaster accompanying us acted as conductor.

Passing Croton-on-Hudson without incident, the officials found themselves back on their own division and showed unmistakable signs of activity. Almost instantly the trainmaster pushed open the door leading to the passenger compartment, stuck his head into the cab and, with cigar bobbing from side to side of his mouth, bawled:

"Hey, you! Do you have to make so much smoke?"

"Who, me?" returned the fireman.

" 'Yes, you! We want to show the boss his railroad and you're laying down a regular smoke screen."

Pulling in his head and slamming the door the trainmaster went back to the inspection party, leaving the bakehead scowling and mumbling. The engineer put on the kind of expression that only an engineer can. His opinion of trainmasters in general was written all over his face.

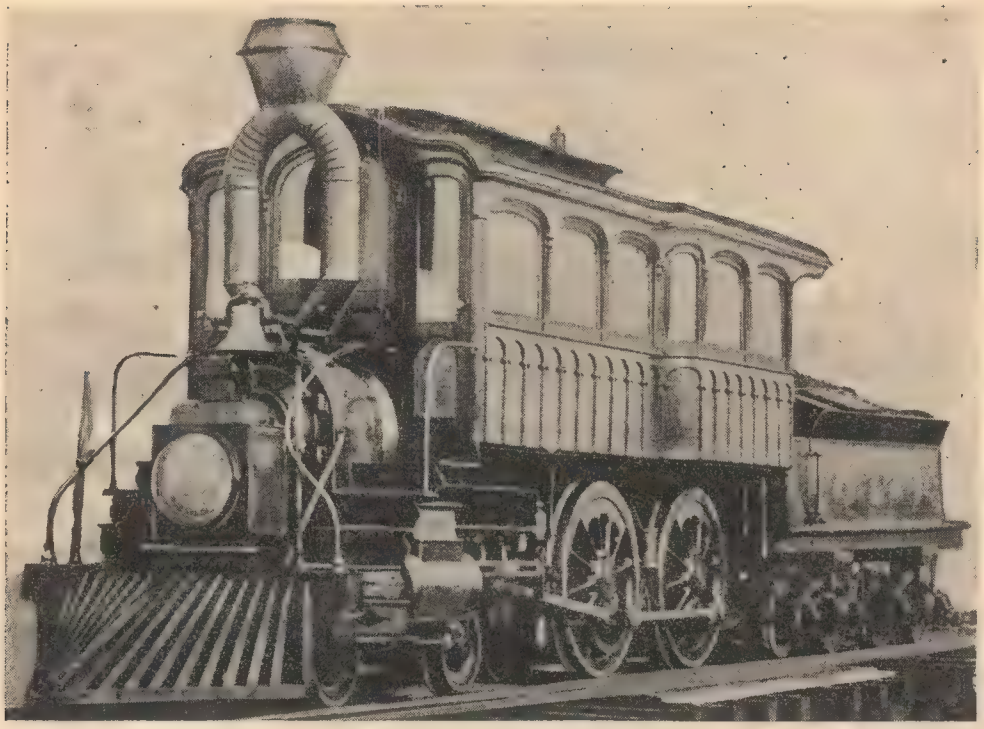
The dispatcher gave us a shot ahead of Number 1, a fast passenger train—with thirty minutes to travel ten miles to Cold Spring. Approaching Manitou, however, I saw that the fireman appeared exceptionally busy. A glance at the steam gage told me why.

"Aw, the hell with it." the engineer growled, pushing in the throttle. "We'll stop and blow her hot."

RIGHT: One way to see through black smoke. New York, Ontario & Western divided the stack of its Number 23

BELOW: Cooke Works outshopped this little 4-2-2, in 1898, for a seventy-nine mile line extending from Hawley to Blanchard, Pa., with a branch between the former point and Lackawaxen

Lower photo from collection of Joseph Lavelle



As we slowed, the door again burst open and the trainmaster glared in.

"Say, what's the matter?" he wanted to know. "Who told you to stop like this?"

The bakehead, putting in a fire, didn't even look up. And the engineer turned his back and suddenly found the countryside most interesting.

"Here, I say," the trainmaster demanded, "what's the trouble?"

Slamming the firebox door, the fireman pushed his shovel into the coal pile and snapped: "Do you hear that blower? Well, what d'ya think that means?"

The trainmaster looked about blankly and then the light dawned.

"No steam!" he cried. "No steam on the superintendent's own engine. Why—"

"Yeh, you said we was making too much smoke," chimed in the engineer. "We ain't no magicians. No coal, no fire. No fire, no steam."

"But what shall I tell the boss? Oh, what shall I tell him?"

"You go say we're gonna head into Manitou, out of the way of Number 1," replied the engineer.

I crossed the cab.

"Are you going to stop?" I wanted to know. "If you do I'm beating it back with the banner."

The engineer nodded. "Yeh, and you let the trainmaster go up to the tower and put us in. I ain't plugging no passenger train unless I get an order."

At that point we stopped and I unloaded. I was back a considerable distance when I was whistled in. But I noticed the signal indicated that we would hold the main.

Climbing into the cab I said: "I thought we were going in for the varnish job."

ST. LAWRENCE was built for Dr. W. S. Webb, of the St. Lawrence & Adirondack RR.

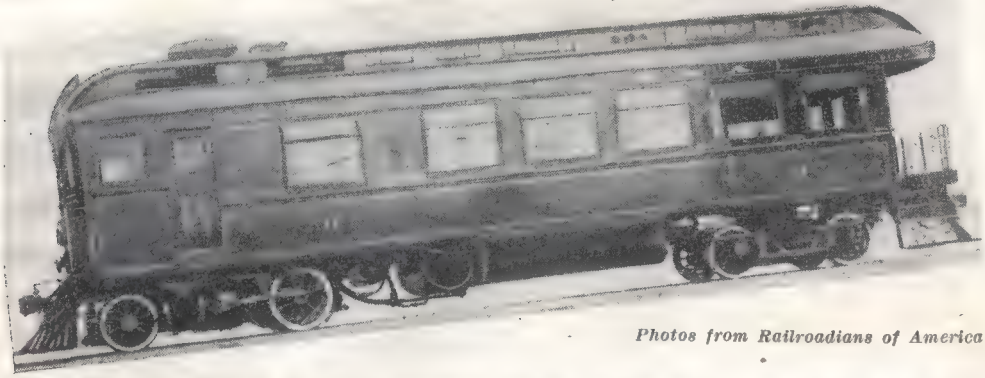
SECOND StL&A inspection engine, the *Ne-Ha-Sa-Ne*, gave Dr. Webb's large parties more room

BOSTON & ALBANY'S *Berkshire* was converted from conventional eight-wheeler in the railroad's own shops

THREE STAGES in the development of Lackawanna inspection equipment

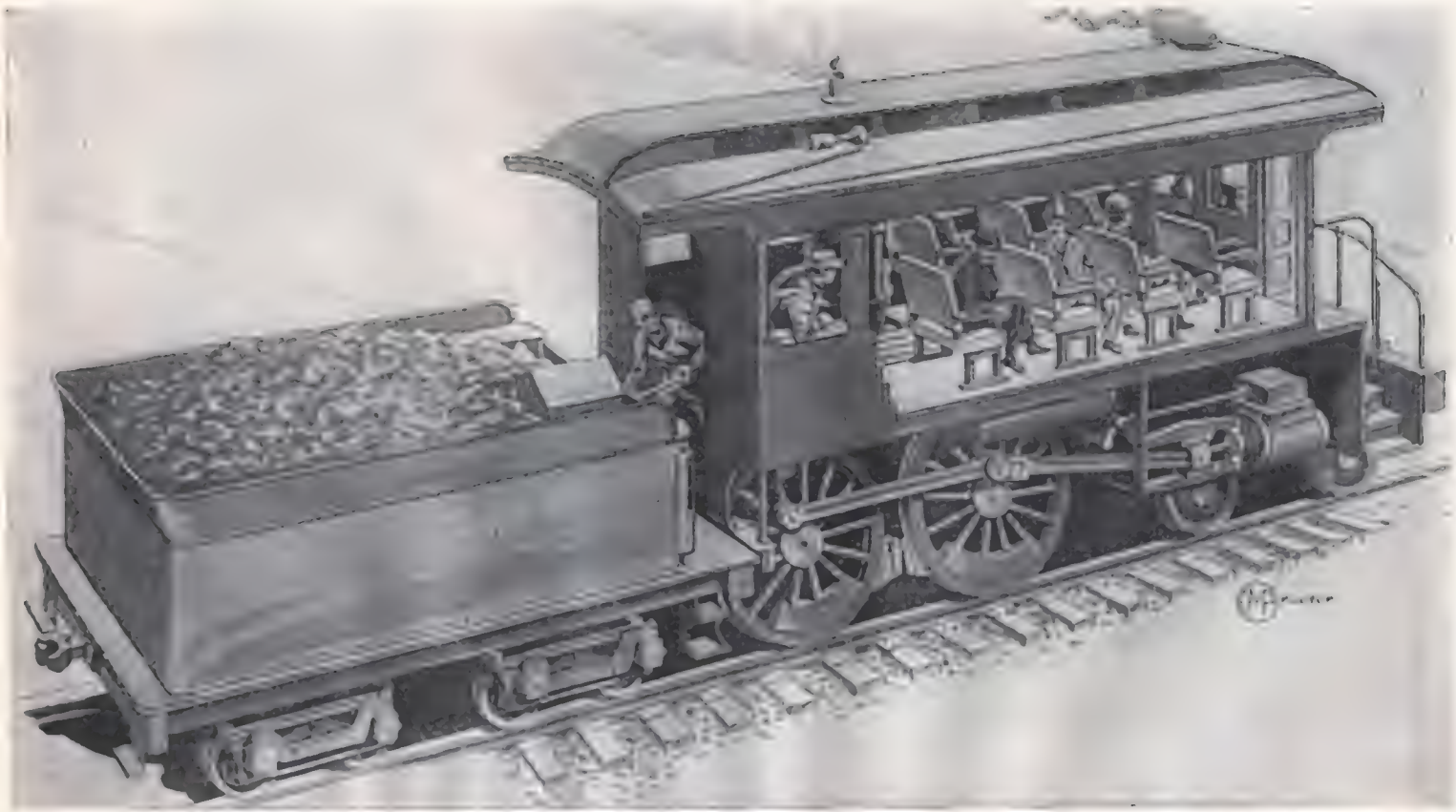
1—The *Comet*, a bicycle type, had small, sloping coal hopper

2—INSPECTION ENGINE *A* bore Morristown & Essex initials at either end of lettering board



Photos from Railroadians of America

3—STEAM COACH *B* had customary vertical boiler, which swiveled with the truck on which it was mounted



CUTAWAY DRAWING of inspection engine illustrates the seating arrangement. Superintendent sat up front

"Nope, I got orders to keep moving," explained the engineer. "Well, we'll do the best we can."

With steam up, we resumed. The engineer thumbed his watch and pulled back the latch. We were speeding along at a good clip to make Cold Spring for Number 1 when suddenly we began to rock and pitch and pound. Thinking we were on the ground I wheeled around and stared at the fireman.

"Start looking for a soft spot to land," he chuckled.

Again the engineer pushed in the throttle. Then he wiped the clock. As we pounded to a stop I peered through the door and saw all heads turned in our direction. Coming toward us for the third time was the trainmaster. I dropped off as he burst through the door. The engineer and fireman followed me. While I went back to flag they examined the engine. Twenty minutes later I waved down the passenger train and rode in on it. The *Hudson's* crew was still hammering away at something inside the drivers.

Number 1's engineer came striding up.

"What's going on?" he asked.

"Dropped a wedge," comes a voice from under the wheels. 'We'll be lucky if we can move the old pot out of the way."

All this time the brass hats were grouped around the engine, looking wise and important but doing nothing. Finally the superintendent opened a window and called down to our engineer.

"Jim, we have a fast passenger train behind us," he said. "Get this thing in on the first siding we come to and let her by."

"I will if I can," was the answer. "My life is worth something."

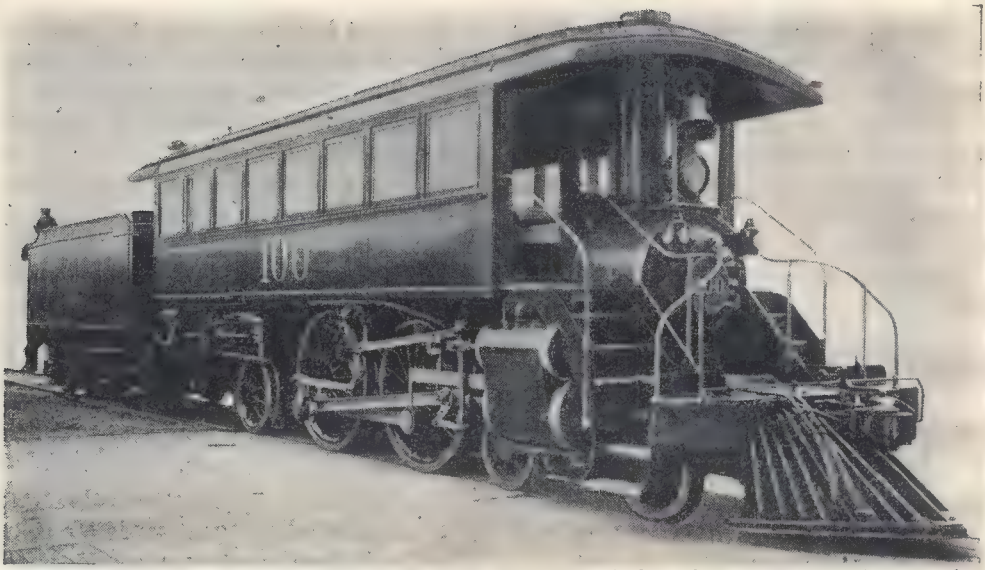
Half an hour later we pulled into Cold Spring and Number 1 whistled past. The trainmaster insisted that I flag whiile we were on the siding, on the grounds that the inspection engine was a passenger train and that I should protect it accordingly. But when the superintendent learned that we would be there for some time he settled the dispute by ordering the siding 'blocked'. Some four hours later we limped out of Cold Spring, arriving at Poughkeepsie two hours later.

Enough was enough. The superintendent ordered the inspection engine to the house and called out a standard Pacific. We coupled onto a steel day coach and late in the afternoon were ready to resume our trip. Thereafter we stopped at frequent intervals while all the brass hats unloaded to point out objects of interest to the superintendent. Finally we pulled into Albany, just under the hog law.

The next time I saw the *Hudson* she was in a stall at the West 72nd Street roundhouse, covered with dust and rusting away. At the time I remember thinking that in a way she marked the end of an era. The only time she would ever roll again would be on her trip to the scrap heap.

FOR ONE REASON or another, inspection locomotives found little favor outside of the northeastern states. Probably a good many southern and western roads regarded them as an unnecessary luxury. Even Jim Hill, for all his pride in the Great Northern, saw no need for such fancy trimmings. He inspected his road from the rear platform of a special train.

The story is told of how, on one of



LARGEST inspection engine and only 4-4-2 used for that purpose, the Readings *100* could pull a complete passenger train. The last one built by the company (1913); she carried no class designation and was scrapped in April 1929

these trips, he pulled the cord and as the train ground to a halt, climbed down and started picking up things along the track. The other members of his party turned uneasily one to another, wondering what the "old man" had seen.

When he at last re-entered the car he spread out on a table an assortment of track spikes, bolts and washers that had obviously never been used. Meaningful eyes surveyed the track supervisor who accompanied the party but that quick-willed individual was not caught napping.

"My God, Mr. Hill!" he blurted, "I'm glad you found that material. I've had my men hunting for it a week and now we can go ahead and finish laying the new rails."

Perhaps the Empire Builder believed him; perhaps not. At any rate the story goes that his ready answer saved him from a reprimand, though the lesson was not lost on any of those present, and soon got around the entire road.

A few lines in the Midwest did go in for the steam inspection car. This was an anticedent of today's gas and Diesel-electric motor coaches, a somewhat colorless piece of equipment having its vertical boiler and cylinder assembly placed directly over the forward truck and swiveling with it. Such units had been built for passenger service by Grice & Long as early as Civil War days, but they did not generally find favor for inspection purposes until about the turn of the century, when the cab-over-engine design itself was still in its prime. A glance at the rosters of a number of roads shows that both types of equipment were frequently operated at the same time. The Delaware, Lackawanna & Western, for example, operated a steam motor car *B* while its 4-4-0 locomotive *A* was still in active service.

Similarly Delaware & Hudson had its engine *Saratoga* and steam car *Transit.*

But the smaller, automotive type of inspection coach was on its way to replace them. It was easy to operate and speedy, dependable and inexpensive. Today, lines operate whole fleets of them—the Milwaukee road alone has nineteen Ford, Chevrolet and Dodge units, equipped with flanged wheels, repainted the pumpkin color of its coaches.

Yes, the old inspection engine has gone. Like the narrow-vestibuled coach, the eight-wheeler and a lot of other things, it has no place in modern railroading. But to those of us who remember these little locomotives in their shining glory, as clean as soap, water and elbow grease could make them, they live on in memory. Let one of them pass you, a light throttle making her exhaust a hardly audible whisper, possibly the clear notes of a silvery bell merged with it; a flash of her two red lights as she disappeared—that was a sight which, once seen, could never be forgotten.

Photo by D. W. Yungmeyer

MILWAUKEE ROAD railcars are finished in pumpkin and maroon of the system. Here's one used in electric territory at Tacoma, Wash.

CLEVELAND, constructed by Lake Shore & Michigan Southern, was the only New York Central inspection engine to be rebuilt into conventional power

Courtesy of C. L. Winey

"GOING TO CAMP FOR PROVISIONS, 1880"—or: "Oh, for the life of a Rocky Mountain section hand!" Charlie hasn't as yet thought to ask how they'll get back

Rulebook's Last Trip

Engineer Ross, About to Get the Rocking-Chair, Finds Use for Knowledge Gained in His Youth

By JOHN PAUL MILLS
Telegrapher, Kansas City Southern

NUMBER 52 shot down the tracks, her headlight illuminating two straight ribbons of steel. Though John Ross, her engineer, was staring intently at the rails, he saw nothing there. His memories were so vivid they crowded out everything else. For on night runs like this he was haunted by the fear of his growing uselessness.

"Rulebook" Ross, as he was called, had come to the Central Division of the Baton Rouge & Northern during a strike on an Eastern road. His record as an engineer was good then, and the following years had done nothing to spoil it. However, everyone knew that the management had not given him the rocking-chair because the country was at war. Ross was aging and a bit erratic. He sensed this, but resented the fact that men wanted him to retire. The consciousness of their talk often made him short-tempered, for he realized that what they said might be true.

Descending a grade, Ross saw the town of Tipton below. He turned from his thoughts to get the signal. His fireman, McQuade, was on the lookout too. A moment later McQuade shouted "Red board!" Ross touched the air to cut the speed and dimmed his headlight, while Brakeman Clung dropped to the gangway to pick up the orders.

Clung returned a moment later and handed them to Ross. The engineer read the orders thoughtfully.

"That's no good!" He swore as he grabbed the throttle and closed it. Then he reduced the air rapidly to bring the train to a full stop. He continued to stare at the orders until, suddenly whistling out a flag, he threw his engine into reverse. With three short toots of warning, he started back.

The other two men in the cab watched him curiously, and then exchanged looks. Someone was going to get merry hell. When the train stopped with the engine before the station, Ross dropped stiffly from his seat. He crossed the cab and down the steps quickly, holding the flimsy in his hand. In the light of the cab, his eyes blazed, and his face was lined with wrinkles.

Framed in the office window stood the young operator. As the rotund form of the engineer approached, his eyes grew worried. But by the time Ross stamped to the door, his face could not conceal his fright. Though the runner had seen this expression before it affected him strangely now. Removing his cap, he ran his fingers through his white hair, and said nothing. Something swept him back to the time he had started out as a telegraph operator himself. No one on the BR&N knew about those days; but as he remembered them his anger died, and he advanced calmly.

"Hello there, Bud!" he greeted in

a kind tone. "I wonder did you leave off the trainmaster's initials from this flimsy on orders or by accident?"

While the youth was struggling to find words, McQuade and Clung, peering from the fireman's window, were prepared for the usual rulebook tirade. They were surprised to note that the arm-waving and curses had not started already.

"I guess I forgot to put them on," said the op. "This is my first night."

"What's your name?" asked Ross, with an understanding grin. "I can't make it out on this order."

"Thad Martin."

"Well, Thad, if you weren't instructed to leave them off," Ross stopped in momentarily amazement at his own reluctance to hurt the boy, "we'll just put them on."

Taking a pencil from the pocket of his jumper, he stepped to a window, and spreading out the order wrote on the bottom, "R. C."

"Now," he said turning to the brass pounder, "the conductor didn't get his yet. You have it there in the hoop, so before you hand it up write those initials on it."

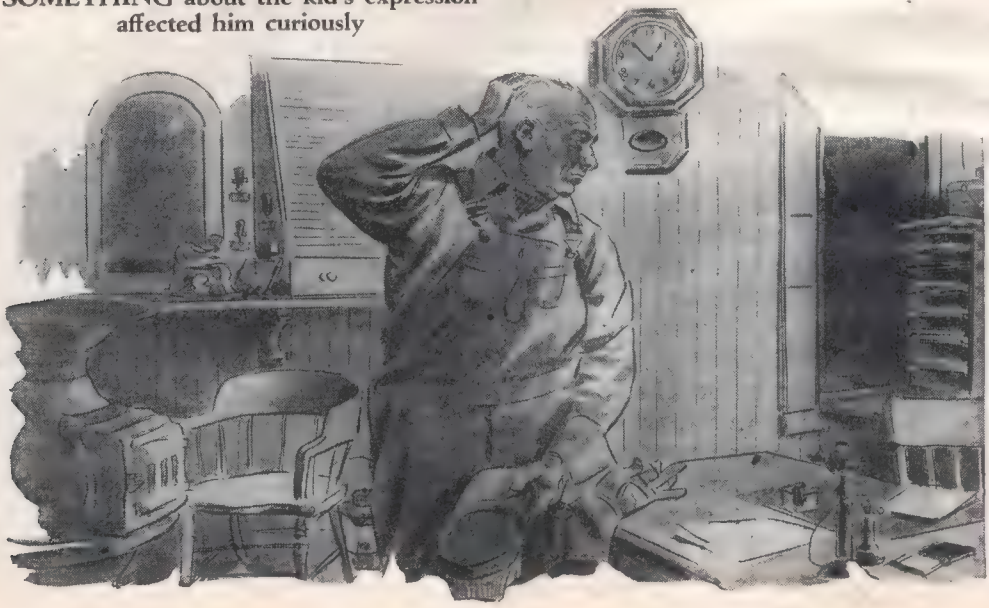
He watched while Thad picked up the hoop, then headed for the cab.

"Don't report us stopped," he called back.

PUFFING from the exertion of climbing steps, Ross handed the orders again to McQuade and called in the flag. Far out of the window he got the highball from the rear end, where he saw the marker light glaring like a red eye in the darkness. The train got under way, and was soon rolling. All this while the aged engineer could feel the eyes of the other two upon him.

His own glance was fastened on the rails ahead. There was no answer he knew to their unspoken question of why he had acted that way. It was far from his usual manner to be gentle, and he himself wondered until he recalled for the second time that night his own first train order, and the memory made him smile.

SOMETHING about the kid's expression affected him curiously



Clung and McQuade saw that smile. Their mouths sagged, for Rulebook smiling at an operator's mistake was unprecedented. They said nothing; yet they felt they had seen the almost impossible.

Nothing else unusual occurred during the balance of the trip. With a sign of relief, Ross turned his engine over to the hostler at Cromwell terminal. This run seemed to have tired him more than he had realized, for when he crawled from the cab a sharp pain shot down his back.

"Damn that rocking-chair!" he exclaimed savagely, as he stumbled over a tie end on his way to the roundhouse. "I wish I was young again like that kid op."

The following night as he passed through Tipton, he saw Thad standing at the office windows, and waved to him. Feeling somewhat sheepish, he glanced over to see if McQuade had seen him, but the fireman had been fooling with the injector, and wasn't watching.

As they sped on, Rulebook's wonder grew. It was strange that for the first time in months he didn't hold a grudge against an operator who had stopped him. Maybe, he thought, "Horse-Face" Glass is right; I'm getting senile. But then Glass had just been furious because he'd run against Number 10 on short time and had to run out a flag, for Glass was conductor of that train.

Damn Horse-Face anyway, he thought. He's as old as I and should be retired. Then the engineer stopped short. Opening up the throttle, he drove steadily ahead.

At Council Grove the following evening, the caller found Ross at the hotel, and had him sign the book for an extra east. Number 52 was to go out ahead of schedule. While he'd slept a Kansas gully-washer had begun, and as he made his way to the roundhouse, the rain still fell heavily.

Clung and McQuade were in the cab already when he climbed in. The brakeman got off, lined the switch, and they pulled down into the yard to couple onto their train. Ross lighted the torch and taking his long-spouted oilcan, dropped down to oil around while waiting air inspection. Back in the cab, he whistled the air. Then, getting the signal from his conductor, Wallace, he eased out onto the main iron when Clung threw the switch. The headlight hardly penetrated the downpour. It was so dark that the flagman had to throw up a fusee when he closed the switch.

The train rode out easily in spite of the slippery track. After topping the hill at Kremlin, a [illegible] siding between Council Grove and Tipton, the runner glanced at his watch and decided they could make Tipton for Number 10. He checked the steam gage and water glass, and leaned back to let her roll.

SENSING the even throb and pounding, his mind went back to a scene he'd had with his wife the

night before. It was as though she, too, had joined the conspiracy to force him out of his job. Her argument was that because they had so few years left, they should spend them closer together; but Engineer Ross knew she thought him too old for work. When he'd objected to becoming useless, she'd said everyone knew he should have been retired long ago. He tried to forget her words, but it was as though everything and everyone reminded him of time, and his age.

A terrific jolt as they crossed a trestle snapped him from his reverie. He looked over at McQuade; and the fireman seemed tense. Clung, sitting on the brakeman's seat, was hidden from his view.

"Bad swing on that trestle," said Clung.

The engineer nodded. At Tipton it was difficult to locate the light on the west switch. The brakeman swung down, cursing the steady rain.

"Red board!" called McQuade as they neared the depot. Letting the engine move at a moderate speed, Ross got up and strode across the cab. Thad Martin could be seen standing inside staring toward the east, evidently watching for Number 10. Glancing back, Ross saw the westbound signal was red. There were undoubtedly orders for Number 10, which was quite unusual at a way station.

Crossing back to look at the rear, the engineer decided they must be about clear of the main line now, so he stopped the train. In a moment or two, he got a signal and saw someone coming along the track with a lantern. Turning out the headlight, he stepped down the gangway just as Clung crawled through the storm curtains. The brakeman was soaked.

"You better dry out," said Ross on sudden impulse, as he watched rain drip from him. "I'll go see what's on that board."

Lighting the torch, he slid down to the cinders just as Number 10's headlight pierced the darkness. The passenger came to a stop suddenly, and Ross had to go around it to get to the station platform. Reaching there, he started through the waiting-room when the sound of loud cursing came to him. The engineer stepped back to the bay window and looked inside.

There was Horse-Face Glass stomping up and down the room, using his lungs to capacity to call heaven to witness the stupidity of the operator. He acts like a madman, thought Ross; then his knees began to feel weak. He had an odd ache in the pit of his stomach as he watched there, unconscious of the rain that fell on him. Mechanically, he took off his cap and ran a greasy hand over his head. It was a terrific shock that he could see himself in so many scenes like this.

"Us old fools!" he whispered.

Thad Martin, standing near the telegraph table, stared at the raging Glass. The boy's face was pale. The utter senselessness of it angered Ross. His lips tightened as he strode toward the office to take a hand in the row.

"What's eating you now, Horse-Face?" he demanded coldly, stopping in front of the startled conductor.

Glass's features turned purple. He waved his hands in desperation.

"This dumbbell has a 31 order for me and just because his phone is down and the wires open he won't clear me. The rules say for him to clear me," he shouted angrily. "But

just what the hell can you do about it, you old fossil?"

LOOKING disgustedly at Glass, the engineer set his torch on the floor and picked up the phone receiver. The line sounded like a coarse file on a tin tub.

"Wires all open?" he asked the shaken Thad.

The boy nodded. Ross then looked at the switchboard on the wall. Two wires were cut in; two weren't. Going up to the board, he shifted cut-in plugs until a sounder came to life.

"That wire's all right," he remarked.

Ignoring Glass, he dropped into the chair that stood by the table and reached over to open the circuit. He himself was puzzled that his hand had not lost its touch.

"What's your office call?" he inquired.

"FN," came the answer.

Ross hammered the key a moment or two, then pulled the 31 order form that lay on the table towards him.

"There's your complete," he said, writing in the form, and handing it to Thad. "Give him that order and a clearance, and get him out of here."

The conductor was bug-eyed. He swept his uniform cap from his head and ran nervous fingers through the thinning hair.

"Hell, Rulebook, I didn't know you were an operator."

Heavy foosteps sounded outside and came through the waiting-room. In a moment Conductor Wallace was in the room.

"There's a whole lot of things you don't know!" he remarked acidly. "And I've been outside watching what's been going on here. So if you've sense you'll take those orders now and get the hell out of here."

Glass snatched the papers from Thad, and hurried through the doorway. Wallace watched him go before he turned to look at the others. Ross stood at the table filling out a clearance. When Thad had signed it, the fireman spoke.

"All set, John?" he asked as he picked up the torch.

Ross nodded and headed for the door. The conductor followed, marvelling how he had never noticed his engineer's feebleness before. Ross didn't know Wallace was watching him, as he stood waiting for Number 10 to pull out. He only saw Thad inside straightening his telegraph table. Suddenly he was terribly tired and old; he shook his head resignedly. Wallace saw this but evidently didn't understand.

They crossed to the engine together. McQuade almost threw his scoop into the firebox when he saw John Ross's face. Ross was stopped by his fireman's look.

"This is my last trip, Mac," he announced, and turned away.

His glance passed over the steam gage and water glass regretfully, as he steadied himself. Then he placed his hand on the throttle and climbed up on his seat.

"They're right," he said. "I *am* too old. All I want now is the rocking-chair."

With the shrill blast of the whistle and the noise of the drivers, he didn't hear McQuade's remark. The fireman's head was turned to the rear anyway, so it didn't carry. Maybe he was watching for a signal; maybe he was just hiding a suspicion of moisture in his eyes. Anyway, it sounded like "Hell" and a few terms more descriptive.

ALONG THE IRON PIKE

by JOE EASLEY

BACK IN 1908, AN ILLINOIS CENTRAL MUDHOP NAMED G.E. DEAN ADDED A THIRD WHEEL TO HIS BICYCLE SO HE COULD TRAVEL BY RAIL TO AND FROM HIS HOME AT ROBINSON, ILL. (From Illinois Central Magazine)

BECAUSE HE HAD BEEN AN ARMY OFFICER IN THE CIVIL WAR, MILITARY DECORATIONS WERE USED ON THE PILOT OF THE ENGINE WHICH TOOK PRESIDENT-ELECT BENJAMIN HARRISON TO HIS INAUGURATION AT WASHINGTON IN 1889

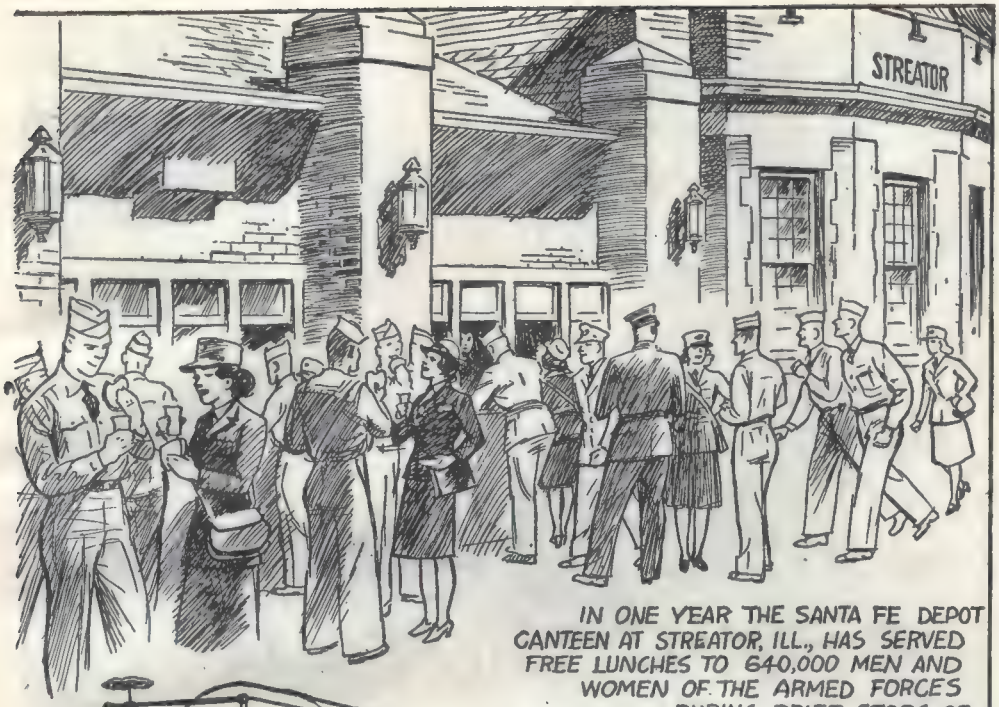
(Drawn from photo from W.E. Gardner, Santa Cruz, Calif.)

"GINGER," PET OF W.A. THOMAS, PIQUA, OHIO, BROKE OUT OF A MOVING BAGGAGE CAR NEAR DAYTON AND MIGHT HAVE BEEN LOST PERMANENTLY BUT FOR B&O POLICE CAPT. J.A. WHEELER, WHO WAS THEN ABOARD THE TRAIN AND MADE A PROMPT SEARCH, FINDING THE DOG IN A FEW HOURS

(From B&O Magazine)

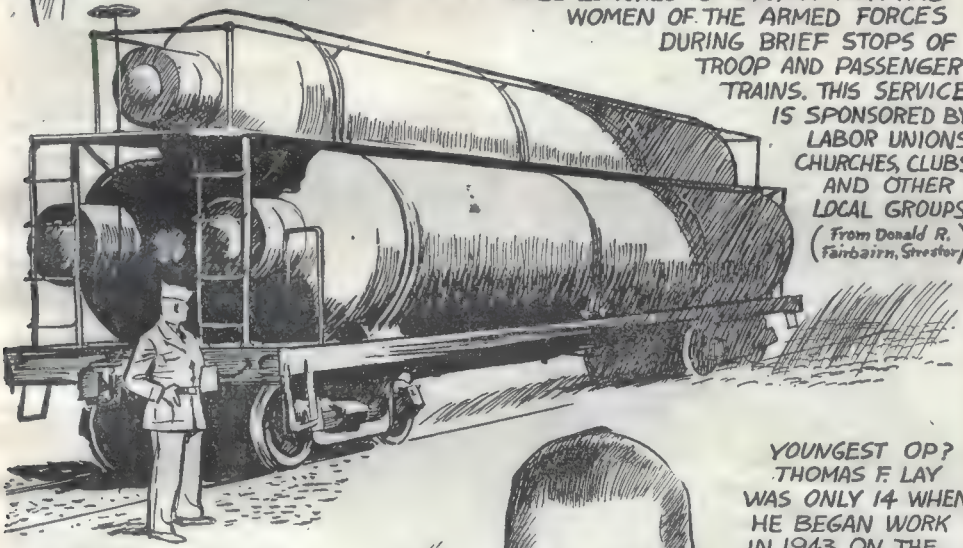
TRACKMAN-FINANCIER: FOR 25 YEARS JOHN F. KRYDER, NOW RETIRED, WAS A BANK PRESIDENT AT JUDA, WIS., AND AT THE SAME TIME WORKED AS GANDY DANCER ON THE MILWAUKEE ROAD

(Thos. V. Maguire, Rockford, Ill.)



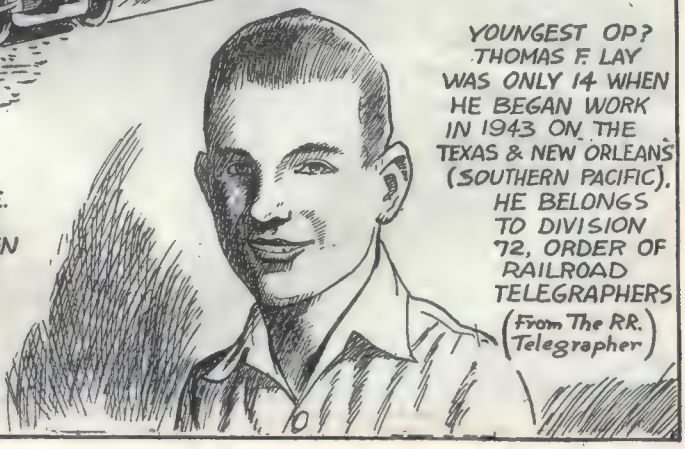
IN ONE YEAR THE SANTA FE DEPOT CANTEEN AT STREATOR, ILL., HAS SERVED FREE LUNCHES TO 640,000 MEN AND WOMEN OF THE ARMED FORCES DURING BRIEF STOPS OF TROOP AND PASSENGER TRAINS. THIS SERVICE IS SPONSORED BY LABOR UNIONS, CHURCHES, CLUBS AND OTHER LOCAL GROUPS

(From Donald R. Fairbairn, Streator)



EVER SEE A THREE-IN-ONE HELIUM TANK CAR? ONLY TWO ARE IN SERVICE. THEY RIDE THE LOUISVILLE & NASHVILLE RAILS BETWEEN SOUTHWESTERN OIL WELLS AND THE BARRAGE BALLOON TRAINING CENTER AT CAMP TYSON, TENN.

(Drawn from U.S. Army Signal Corps photo)



YOUNGEST OP? THOMAS F. LAY WAS ONLY 14 WHEN HE BEGAN WORK IN 1943 ON THE TEXAS & NEW ORLEANS (SOUTHERN PACIFIC). HE BELONGS TO DIVISION 72, ORDER OF RAILROAD TELEGRAPHERS

(From The RR. Telegrapher)

I WARNED: "Don't do it! If you pass that switch I'll stop you!" (Page 41)

Pocahontas Division

After Handling Steam and Juice on One Division 48 Years, an Old Engineer Is Glad to Retire, Saying, "I Feel I've Done My Share of the World's Work"

By ALFRED H. HOCK

IN THESE MODERN DAYS when an engineer can set brakes on a train of any length in a few seconds, when roadbeds are solid and cuts give relatively little trouble, few men except the old-timers can realize what it meant to go out on dark, stormy, cold nights and have nothing with which to stop your train in an emergency except the things you ran into, such as rocks and slides and occasionally a caboose; when the construction was only a few years old, and after every freeze, thaw, and rainy spell, huge rocks and slides would tumble down unexpectedly on the track; and when engines sometimes would run into these obstacles, being derailed or maybe hurled into the river, often with loss of life.

Such scenes troop through my mind as I look back to forty-eight years of engine service, all of it spent on what is now the Pocahontas Division of the Norfolk & Western. I told you last month how I came to leave my home in Pennsylvania in 1893, drifting south to Bluefield, W. Va., and going to work for the railroad. I am still living in Bluefield, at 215 Rogers Street, but have recently retired from the N&W and am dreaming over the past.

I wonder if the younger generation will ever really understand how sweeping are the changes which have come over the railroad with the passage of years. Today when a train breaks in two everything stops; but in a bygone era when this happened you had to keep the front end away from the rear until, by means of hand brakes, you got it stopped—otherwise you'd have a wreck.

At times the front part would be running too fast down a mountain grade and would get out of control, leading to disaster. *Then* brakemen had to ride the tops of all freights to hold them to a proper speed down the grades; *now* they travel more comfortably in the engine cab or caboose. It is

Photo from Joseph Lavelle, 4615 66th Street, Woodside, Long Island, N. Y.

NUMBER 28, an eight-wheeler built with link-and-pin couplers, dates back to the halcyon days of Al Hock's youth

hard for me to understand how, in the face of all those hardships, so many men were able to stand the gaff and stick to the job.

Thoughts of another world would come to me as I railroaded through the West Virginia hills and valleys. In spring the miracle of life reasserts itself with the opening of bud and leaf, recalling the mystic words of Christ, "I am the resurrection and the life." And autumn paints the countryside with a riot of color unfolding for miles like a panorama. Its exquisite beauty I will never forget. To me it symbolizes the glory of God in the mountains.

Each fall the magnificent chestnut trees used to be filled with burs. Young fellows would go out in the woodland, beat down the nuts with saplings, and take large quantities of them to the rural stores. You could purchase all the big chestnuts you wanted at a dollar a bushel. Today, however, most of those fine trees have vanished, although the *chinquapin,* or dwarf chestnut, is still with us.

Rabbits, too, were plentiful in those days when I ran engines—they seemed to be everywhere. I remember stopping near one of the troughs that were placed under the rails to drain off water. A light snowfall had blanketed the landscape and I saw rabbit tracks leading into that trough. Peering in, I observed a cottontail had taken refuge there. The refuge was only temporary. With the aid of a fence rail I prodded Mr. Rabbit out of his haven into the waiting hands of our flagman, whom I had stationed at the other end. The flagman was a good exponent of caboose cookery. On this occasion he prepared a savory rabbit stew, which he served with home-baked biscuits.

It was not unusual for a brakeman or conductor to be versed in the culinary art. For years I was on a run where we all had hot caboose-cooked meals every day we worked. When dinner was ready I would let the fireman handle the engine while I went back to the hack to eat, and as soon as I finished he would take his turn at "putting on the feed-bag." We lived on the fat of the land. Here and there along the road, rural grocery stores sold such delectables as ham, eggs, bread and butter, milk, cheese, fowl, fresh fruits and vegetables in season, and sometimes beef. In the spring we could buy delicious wild strawberries for fifty cents a gallon. Try and do that today!

I FOUND MYSELF running the second engine of the doubleheaded train 84 and 85. The engineer on the first locomotive, who had been promoted a year before me, had one steady gait. If you pushed him faster than he wanted to go, he would shut off, and if that didn't check the train he'd put the brake on lightly. It was not easy to work with him.

Years later, when I was no longer on that train, another engineer was pushing him on the same run. The two men clashed; each claimed the other was shirking. Number 299, assigned regularly to the head engineer on this run, would scarcely shoot off a spark, while her pop valve would be open half the time. He

argued that no matter how hard you worked the 299 she wouldn't throw any fire and her pop valve wouldn't seat. The other man retorted that he, the head engineer, did not work her hard enough to do either.

Meanwhile, I pulled into Norton one evening about seven o'clock, not expecting to leave until the next morning. However, the head engineer on 84 had taken sick and I was called to handle his run at eleven p.m. Stepping up on the engine, I told the fireman, George Richardson:

"Buddy, you're firing for a jack rapper tonight."

He laughed. Coupling both engines to twenty loads of time freight, we left two hours late on the schedule, which was slow, to get our filler at Boody. After leaving there, we had gone but a few miles when, looking back, I saw someone in the caboose waving me down. One of the time-freight cars had a hotbox. We waited forty minutes while a brakeman packed it, and had to set it off at Finney, where we got water. Then we decided to make up lost time, if possible. Up hill, down hill and across the levels both engines roared, the stacks raining fire that night. The pop valve on the 299 did not stay open. I was using the steam! The crew told me afterward that it certainly made a difference in the head man and that I had showed up who was shirking.

Another time, I got out of Bluefield on Number 85, with that same man on the head end. At Graham (now Bluefield, Va.) we were given an order to run as Number 85 from Graham to Norton and meet Number 84 at Richlands, where 84 would take siding. I gathered from the way the order had been put out that the dispatcher probably intended to run us farther down the road for 84.

Now, the rule on this subject was commonly understood to mean that when a train superior by right or direction was directed by train order to take siding, but the dispatcher changed the meet without reference to the siding part, timetable rights governed and the inferior train had to take the siding. Relatively few men thought the other way, that the siding part was yet in force. This engineer was one of few. When we got to Richlands, the order board was out. We signed up for orders that Numbers 84 and 85 would meet at Daw instead of Richlands, with no reference to the siding. As we were walking down the station platform to the engines I remarked:

"Well, we head in at Daw."

"No," said the other engineer. "They've changed the meet and said nothing about the siding, so that part still holds good, I'm going down the main line."

I argued against this interpretation. At length I warned: "Don't do it! If you

NOW A BUSY RAILROAD YARD, the "garden" at Norton, Va., prior to 1891 was merely a dirt road in the wilderness

do, I'll cut my brake in and put the brake on—I'll stop you!"

He did not answer, but I heard him growling all the way to his engine.

"Remember what I said!" I yelled.

The conductor, who was with us, didn't say a word. Soon we were under way again. I shut off. The head engineer felt it and knew I would do as I had promised, so he headed in. Just as we reached the lower end of the siding and stopped, Number 84 dashed around the curve at about twenty-five miles an hour. I got off and walked over to the first engine.

"Well," I said, calling the engineer by name, "if you had been on the main line now, what would have happened?"

He did not open his mouth.

MY MIND goes back to the night I was on 84, eastbound, and received instructions to pick up a car of stock at Cleveland. Before we arrived there rain had been pouring down but had stopped. When we picked up the stock car and coupled it to our train I happened to look up. The clouds had partly cleared away and a full moon had come out in all her glory. A perfect rainbow spanned the sky. I called the crew's attention to this phenomenon. It was of only one color, the same as the moon; and as we watched, drifting clouds blotted it out. I had never before viewed such a rainbow.

On these runs we almost invariably had to get coal down for the fireman; it would not flow by gravity but had to be shoveled forward so he could reach it. The front brakeman performed this chore for the head fireman, while the men on the second engine generally had a hobo do the job, for it was not unusual to have a nonpaying passenger in the cab. On the night of the weird rainbow we had picked up a colored fellow. The average member of a train or engine crew carried a large lunch bucket that would hold enough to last the round trip. For some reason, however, I had eaten several meals in town and had considerable food left. The next morning when we were taking water at Tazewell I opened my pail and ate some meat and bread, all but the crust. I threw the crust into the coal. The colored man was sitting on the end of the tank. He jumped down, seized the bread, and devoured it instantly. I looked at him a second; then I shoved my bucket at him, saying:

"Here, Jack, you need this more than I do."

The Negro smiled broadly and voiced his gratitude. After he had eaten what was in the bucket, I knew he was no longer hungry, for he had consumed the equivalent of two big meals.

I am glad to assist a fellow if I can, for I never know when I might need similar help myself. Years after that incident at Tazewell I was heading east on a snowy, slushy rail and while my crew were unloading local freight I observed that the swing man, a stranger to me, had his toes sticking out of a very disreputable pair of shoes. Calling him up into the engine cab, I told him to pull out the fireman's seatbox and dry his feet as well as he could at the firedoor. Then I loaned him my rubbers for the rest of the trip.

One day in 1902 a vacancy showed up on the second engine of Number 86, a daylight time freight, which I asked for and obtained. We made good runs for months without any trouble. Then came a Sunday morning when we left Norton with our seventeenth car loaded with horses. We dropped down Bull Mountain about twenty miles an hour. In the middle of Big Bull Tunnel, the back axle of my front tank truck snapped in half, sweeping the back truck out from under the tank and wrecking seventeen cars. No lights were burning on the engine, because it was daylight outside of the tunnel. Inside, where we were, it was pitch black.

The tank dragging on the ground jerked so roughly that I felt sure the engine had been derailed. Pushing up against the reverse lever and the boiler as close as I could, I feared the locomotive would topple over against the side of the tunnel, rip her steam pipes off and scald me, or tear the cab off and grind me to death. It seemed as if she would never stop.

Finally, when all motion ceased, I called

my fireman, Charlie Johnson. He didn't answer. I hollered again. Still no reply. I reached for my torch, which set on the floor in front of me. Stepping out into the tank to light it, I felt the slope of the tank. Thus for the first time I realized what had happened. Opening the firedoor, I lit the torch and held it up. By its eerie flickering light I saw Charlie on the seatbox. He was in a daze. I thought my time had come. A brakeman who had been on top of the car that contained the horses said later that the animals must have known something was wrong, because they carried on so. (Incidentally, Charlie is now an engineer on the same division.)

Another run, with a train eastbound and one westbound daily except Sunday, picked up cars and moved them between the various stations, besides doing the necessary switching. My run lay over in Bluefield on Sunday. The job required men of sturdy physique. Often we were on the job sixteen, eighteen or even twenty hours a day.

One morning in about 1903, when I had Ed Mays as conductor, we received an order at Richlands which stated: "Extra 152 west will meet fourth Number 72 at Honaker." When we arrived at Swords Creek the order board was clear. Not having any work at that place, I did not stop but went on to Gardner, a small siding about halfway between Swords Creek and Honaker. Having about ten minutes' work at Gardner, I blew the whistle for the flagman to go back. After finishing the job, I called him in and proceeded to Honaker. There I pulled in the siding, up to the telegraph office where fourth number 72 was standing, and learned what the dispatcher had done. He had changed the meet order to Swords Creek instead of Honaker. When the engineers and conductor of fourth 72 had signed the order, Tom Ford, the operator, had said to them:

"Boys, I don't know, but I believe Extra 152 is by Swords Creek."

"What makes you think so?"

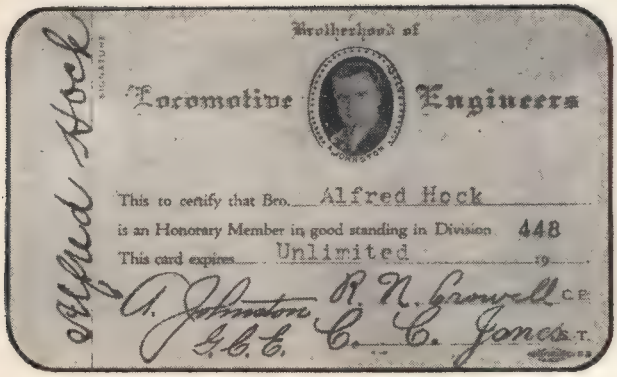
"I heard a whistle over on the mountain a while ago," Tom had replied.

Afraid to go and equally afraid not to go, as they had orders, the crew had stood there for some time, until they had heard me call the flag; then they wouldn't go. Ten minutes later I rolled into Honaker. I have always believed that the reason why the dispatcher changed the order was that the operator had been out of the office when we passed and didn't hear us, and when he came in and was asked if we had gone by, he told the dispatcher, "No." As a result, the dispatcher was demoted to operator for six months.

ONE DAY we came into Bluefield delayed so badly that it was almost time to report for the next trip. Our entire crew laid off, and an extra crew caught the run. That night they pulled into Russell Creek for Number 84. They rolled in a little farther than necessary, and when they stopped the caboose rested down behind an embankment where she could not be observed from the main line. They had some cars to pick up about a half-mile up the hollow; so the conductor, after instructing the flagman to look out for Number 84 and see if she carried signals, cut off the engine and, with the two brakemen, set about their work.

But the flagman was drowsy. Instead of watching, he climbed into the hack and fell asleep. When first 84 came along, the engineer failed to blow signals as required by rule at junction points, because he did not see any sign of another train. I have already said the caboose was hidden. The noise of the passing train awoke the flagman but not in time for him to notice whether or not the engine carried flags indicating that a second section was following. When the crew returned, he took a chance and told the conductor that 84 had no signals.

With this assurance, the skipper ordered his engineer to back out and proceed up the mountain. They had not gone far before, rounding a curve, they collided head-on with second 84. Both trains were badly smashed and the fireman on second 84's first engine went to glory. The accident was all the more pathetic because it could have been avoided with due care.


Brotherhood of
Locomotive Engineers
This to certify that Bro. Alfred Hock
is an Honorary Member in good standing in Division 448
This card expires Unlimited 19
Alfred Hock
SIGNATURE
G. Johnston G.C.E.
R. N. Growell C.E.
C. E. Jones S.T.

AMONG Mr. Hock's most valued possessions are his comfortable home in Bluefield, W. Va., and his life membership card in the Brotherhood of Locomotive Engineers, which he joined November 14th, 1897

Another train wreck caused by negligence comes to mind. The members of our crew were standing at the Richlands station waiting for a local train, Number 72, to leave so we could do our work. The order board was out and the operator had given them a clearance card, going back into the depot when they left. Just as their caboose was passing the east switch he ran out again, crying:

"My God, has the local gone?"

"There she goes," I said.

"But I have an order for them to meet 71 here," he replied. "I forgot to give it to them, and now they are by Cedar Bluff.

Dashing over to my engine, I blew "down brakes" several times very loud; but if they heard that signal they probably did not know who it was meant for.

"Ask the dispatcher if he wants us to go after them," I suggested to the op; and he soon got the necessary permission. Even before the okay came, I began cutting off my engine.

"Don't run into them!" he warned.

Out on the main stem, we raced after the local. But it was too late. We found Number 71 about a mile and a half from the station, with both engines and several cars reduced to wreckage. Fortunately, they had met on a straight line and had seen each other in time for the crews to unload before they hit.

WHEN a Norfolk & Western engine destroys livestock, the management is willing to pay a fair sum in compensation, but will fight a case if the owner's demands are unreasonable. Take, for example, the time I hit a cow at Cedar Bluff. I had four cars that day and work was very light. Coming into town, I loafed along at about four miles an hour until I noticed that the operator had pulled down his order board, signifying that he had no work for me and the track was clear.

Now, at that point the track curved sharply to the left and was crossed by a highway at the eastern end of the depot. When I got the board I opened the throttle, and by the time I rumbled over the crossing I had attained a maximum speed of fifteen miles an hour. Meanwhile, the fireman had thrust his hook into the firebox and so was not looking ahead. A cow suddenly decided to amble across the rails from the left. Unable to stop, I struck and killed the animal. This cow belonged to a widow. The railroad company offered her thirty-five dollars, but she would not accept, and brought suit for sixty. When the case came to court I was called upon the witness stand. I observed that the lawyer for the plaintiff had a Norfolk & Western book of rules.

He asked, "How fast were you running when you struck this cow?"

I replied, "Fifteen miles an hour."

"Were you under control?"

"No, sir."

"So you were violating company rules?"

"No, sir," I denied, "I was *not*. Company rules required me to come into the station under control, which I did; and when the board dropped it was a sign to me that the track was clear and I could leave the station at maximum speed, which I did."

The judge, who happened to be an ex-operator and knew the rules, nodded his head in approval at what I said. The lawyer's case collapsed and he lost the suit, but the company voluntarily sent the widow a check for thirty-five dollars. She probably used it to pay the attorney.

On another occasion, westbound with only two or three cars and a caboose, I came to a spot a couple of miles above Graham (now Bluefield, Va.) where the track ran through a farm that had been divided when the road was built. Two boys, about five or six years old, were standing on the right-of-way with a little dog to whom they obviously were very much attached. As the engine was about to pass them the dog darted out on the rails and was cut in two. After we had gone by, I stopped and looked back at one of the saddest sights that ever met my eyes. Each youngster had picked up half of the dog and was sobbing bitterly.

That was a real tragedy for those lads. I shared their sorrow, but there was nothing I could do about it. No engineer can be held responsible for the death of a trespasser, man or beast, who unexpectedly appears on the track in front of a swiftly moving train.

All along the Clinch Valley men work continually at repairing bridges. In my time they did not have motor-cars, as the bridge gangs have today, so they often had to walk for miles from place to place, lugging their tools. Whenever I saw the men hiking as I came along I would stop and pick them up, letting them off at the site of their next job or near their homes, as the case might be.

Naturally, I made friends with them,

ROAD-BUILDING. Number 44 was used in construction service in 1891 when the line was being pushed to Norton

getting favors in return, sometimes good meals. On a certain flat about a half-mile west of Raven, holly grew in profusion, and as the Christmas season drew near I would ask the section foreman to get me a holly tree. Well, on my next trip he would have the nicest tree he could find, setting alongside the road. I would stop and the flagman, who would be on the lookout for this holly, would load it onto the caboose and bring it in.

GOING WEST early one morning at a fast clip, I emerged from a cut to see on the track ahead a hand-car filled with section men and their tools. The boys barely had time to jump in the clear when I plowed into the car, hurling it half as high as the engine and raining dinner pails, picks, shovels, bars and other track equipment all over the place. Of course, I big-holed her, and after grinding to a stop I waited impatiently for the foreman to come up. Then I asked:

"Where was your flag?"

"I didn't have any," he admitted. "I listened, but didn't hear anything coming."

"You should have listened longer," I said sharply.

"Yes, I know, Mr. Hock." He hesitated, as if mustering up courage to ask a favor. "You won't make a report of this, will you?"

I shook my head reassuringly. But I knew the hand-car was badly battered and I failed to see how the section boss could alibi his way out of it; so when I reached Richlands I quietly told the Roadmaster what had happened. The latter also urged me not to report it, saying he'd get the car repaired; whereupon I let the matter drop.

Bull Mountain, on what is now the Pocahontas Division, has several very high bridges, and before the turn of the century the ties extended further from the rail than they do now. While I was descending the grade one day I saw a man in the middle of a bridge. I put the brake on, but was running fast and could not stop immediately. As we drew near, the stranger stepped out onto the end of the long ties, dangerously close to the edge, and stood rigid as the train shot by. How he kept his balance I do not know. After the caboose passed, he resumed his walk between the rails, apparently unconcerned. I have never seen a finer exhibition of nerve.

In course of time the N & W replaced its wooden trestles with steel. They erected a movable derrick to handle the steel on bridge 1398, a timbered structure about a hundred feet high, and had gotten out about midway with this machine when I crossed with a ten-car train, the middle car being a load of coal. Glancing back, I saw the front truck of the coal car jump the rails at the crane. Of course, I threw the brakes into emergency position and slid a few feet before I could stop. When I finally came to a halt the coal car's front end was sticking out a foot or more over the side of the bridge!

If it had fallen over, there is no doubt in my mind but that it would have ripped up the trestle, with frightful loss of life. The bridge workers, as well as everyone else in sight, plainly showed their relief when the train stopped. After that, laborers put chains around the derailed truck and we dragged the car back onto the rails.

For years two passenger trains a day were operated in each direction over the Clinch Valley line. Eventually one of them was cut off, but a coach was coupled onto the local freight, making it a mixed train.

One day two trains were run on schedule, the first section having sixteen cars of wheat, while I got the second section with whatever cars I picked up. Coming into Maxwell, I was in sight of the first section, but stopped to let off and take on passengers and unload coal. When I started again the other train was no longer in view. After turning over the hill at Young's Summit I let her roll, as I felt sure they were pretty far ahead.

I well remember my consist at that time: I had five cars of coal, with airbrakes; seven cars of lumber and less than carload lots, one coach, and one caboose. Rounding a rock bluff near the foot of the hill, I was making between twenty and twenty-five miles an hour when I saw the rear of

the first train, stock still, her flagman standing at the caboose and waving me down. I knew that the airbrakes could not stop my train in time, so I instantly reversed, opened the throttle wide, and pulled out the sand lever as far as possible, sending two streams of sand hour-glassing onto the rails.

As soon as my front and middle brakemen saw the caboose ahead they unloaded. The fireman followed their example. The conductor put a brake on the passenger car and the flagman did likewise on the caboose. With all the power of the engine thrown against the train, our speed slackened perceptibly. At that point the track crossed the head waters of the Clinch River on a short bridge. When I first caught sight of the caboose it seemed to be standing on the bridge and I thought I would not ride the engine across. Looking again, however, I realized it was standing a couple of car-lengths beyond the bridge and felt sure I could ride across and yet jump off before we hit. Finally, when I got the train stopped I could have stepped off my pilot onto the caboose platform—it was that close! If I had become rattled, the situation would have been just too bad.

HIGHBALLING east on another trip, we'd had a long hard day of it, getting to Tip Top at eleven p.m. From there to Graham is ten miles, all down grade to a connection with the main line on the Pocahontas side. Anything coming off the Clinch, not under control, that would strike a train on the main stem could cause a disastrous wreck with probable loss of life. In a distance of a couple of miles from Tip Top were three short bridges that recently had been filled with earth. As this earth settled it had pushed the timbers out of line, causing a badly-surfaced roadbed upon which the men kept dumping cinders in until it became solid.

We were instructed to get a stock car loaded with heavy oak lumber that stood on a spur at Tip Top. I stopped in the clear. The brakeman cut the engine off, walked over to the track and closed the derail. Then he pulled away a small plank from under one of the car wheels, whereupon the car started to roll. When he ran up the car ladder to put the brake on, he found the chain was broken and the brake useless. The car rolled out on the main line in front of me and kept on going. At that time the conductor, W. A. Vawter, came over.

"Captain," I asked, "why did you drop that car out in front of me? Are you taking it downhill ahead of us?"

This query seemed to annoy Mr. Vawter. "I didn't tell them to drop a car out in front of you," he said.

He went on down to the switch, and soon dashed back. "Al," he called, "that car is running away! Can you catch it?"

"Get on!" I said, pulling the throttle open.

Running to the front end, he swung onto the pilot. There was no moon or stars. It was quite dark. Down the mountain we swept, the engine rocking wildly over filled bridges; and when we drew near Bailey, three miles from Tip Top, we caught sight of the runaway. Regulating my speed to conform with that of the car, I gradually closed in on her and made a precision coupling, both engine and car being equipped with automatic couplers.

The maverick's fling was over. We led her, hog-tied, back to the corral. But I can't pass on to another incident without first paying tribute to Vawter's fine courage. That man rode the pilot at a fast clip downgrade, with no light to guide him except the dim glow of the oil-burning headlight. If anything had gone wrong he might have been maimed or killed.

Once again the Clinch Valley and the Pocahontas were merged into one division, and when an Elkhorn run turned up on the Pocahontas side I bid for it. This job was mostly at night, but it pleased me because, after each round trip, I was relieved in my home town of Bluefield. I held the run for years. Although I liked it very much, I was obliged to use care to keep out of trouble. For instance, the division had yard boards at various places where the crew were not required to flag. At these points there was no indication

as to whether or not other trains were nearby. You merely *hoped* that nothing would be occupying the rails in a location where you had little or no chance to make a quick stop.

By this time nearly all of the rolling stock had been equipped with air. However, if you applied the air to get your train under control and released it before you stopped, the brakes would release on the engine and front part of a long train but not simultaneously on the rear. This usually snapped a knuckle or yanked out a drawhead, causing a break-in-two and grief for the entire train crew. Engineers often avoided this difficulty by shutting off the throttle some distance from the yards so the train would slow down gradually without their having to apply the air. Today the brakes can be applied or released on the locomotive independent of the train, which is a great improvement.

ENGINES would back out of Bluefield so as to be running ahead when they returned with loaded trains. One morning I left town with two locomotives and a caboose, and was on the leading engine when we rumbled into the Bluestone yard, running about twelve miles an hour. The road at that point curved toward the fireman's side and he could see pretty far ahead; but on this occasion he must not have been looking out, for he gave no warning until we were practically on top of the Iaeger local, which had nine or ten cars and a caboose, and then he cried:

"There's a rear down there!"

I shut off the throttle and applied the brake, but rain had been falling and the rail was wet; the drivers locked, and both engines slid into the caboose with considerable force. The way-car was an eight-wheeler. When we struck it, the impact drove the train four or five car-lengths ahead, the rear of the caboose jutted up off the track, and the back truck was forced up against the front truck but did not leave the rails, while the back end of the way-car fell down on the rails.

Now, it happened that a number of crews, running light or with but a few cars, were in front of us and unable to see what was going on because the tower

SOLE SURVIVOR of four men depicted here is Engineer Hock, in the cab of the 557. Death has since claimed the fireman on the tank, the conductor, and an engineer on the ground

blocked their view. Hearing the racket, about twenty-five of these men rushed back to find what had caused it. A gang of trackmen, getting ready to renew the rail, had distributed new steel and ties in convenient piles. When the crews saw what was up, they placed ties across the track, picked up a rail and put one end of it under the caboose. Then, using it as a lever, they manipulated the truck back into place, and the job was done. No report was ever made of it.

CLAPBOARD-WALLED SHACK at Norton, Va., served as the railroad construction engineer's office fifty-four years ago

One winter night of wind-driven snow, we pulled out of Bluefield with fifty-five empty hoppers. My conductor was John H. Johnston. Lapping the time of Number 85, we crossed over to the eastbound track to get out of their way. While we were waiting, another Elkhorn crew with a long string of empties came by. Like most other Elkhorn trains, this one was "bobtailed"—that is, had no caboose. The flagman of a "bobtail" rode a rear car without protection from the weather and no place to keep supplies. As a result, he generally carried only a few flags, two red lanterns, a white lantern, and several torpedoes and fusees.

When the crew with the empties passed us they were running about twelve miles an hour. Ten minutes later Number 85 came along, making twice as much speed. She roared on through.

I told my conductor: "Captain, 85 is going to eat that Elkhorn up."

"Oh, no," Johnston contradicted.

"Wait and see," I said grimly.

After 85 had gone in a whirl of snow, we followed them for about a mile and a half, when we saw a flag. After picking up the flagman I asked him what was wrong.

"I don't know," he chattered. "They made a terrible stop."

The man had not exaggerated. When we reached the head end a fearful sight met our eyes. Empty cars were piled high. The locomotive rested on her side, surrounded by time-freight cars, some of them badly smashed. Amid the twisted wreckage lay the dead body of the fireman, a Negro. Scenes like this take a lot of the starry-eyed romance out of railroading, but every veteran engine or train man is familiar with them.

The subject reminds me of Joseph Broady, a tall slim man with pleasing personality, who pulled trains on the Pocahontas Division around the turn of the century. Joe and I were good friends and fellow Masons. When I joined the Royal Arch Chapter Number 20 he gave me a Royal Arch badge, shaped like a keystone.

Shortly afterward, my friend left the N&W and hired out to the Southern. He was pulling the Southern's fast mail train Number 97 when it plunged off a mountain trestle near Danville, Va., on the afternoon of September 27th, 1903. Joe and ten other members of the crew were killed. I recall the shock I had at the news of his death.

This tragedy is immortalized in a folk-

MOST IMPORTANT vertebra in the backbone of the Pocahontas Division, famed for its coal industry, is the Bluefield, W. Va., yard, pictured at the height of Hock's long career on the roaring road

song, *The Wreck of Old 97,* one of the most popular railroad ballads ever written. You can still hear it on Victor phonograph records and occasionally on the radio or vaudeville stage. The song-writer related that Joe "was goin' down hill at ninety miles an hour" when "he lost his air-brake" and "was found in the wreck with his hand on the throttle and a-scalded to death with the steam." Why the brakes failed to operate I never did know. For many years I kept that Masonic badge which Joe Broady gave me, but recently I seem to have mislaid it.

The N&W of thirty, forty or fifty years ago was quite different from what it is today. I remember when most of the road was single-tracked, while yards were small and facilities were poor. Sometimes it took you hours to get a right of way through the yards even after you had reached a point near the terminal. For only twelve miles of the Pocahontas Division—between Bluefield and Bluestone—the line was double-tracked.

I OFTEN THINK of the small yard at Flat Top, seven and a half miles from Bluefield, where coal-train crews would set their drags off and return to the field for another load. When they came back on the day's last trip they would get a pusher and pick up additional loads at Flat Top to bring in to the terminal. Even this practice would not keep the yard cleared. An extra crew—known as a Flat Top Hill crew—had to be called every now and then to bring in surplus loads.

One bright sunshiny day I was called on this run. After going to Flat Top for our train, we started back to the Bluefield terminal. To give you some idea of the delays we encountered in this one short trip: *from the time we reported for the seven-and-a-half-mile run until we pulled into the yard was exactly twelve hours.* And this is how it happened:

We were ordered to go to Flat Top for the train. Returning with it to Graham, we ran up behind another train standing there. The main line was blocked from that point to Bluefield, a distance of three miles. Now, in case you don't know it, sitting on an engine all night is not the most amusing job in the world. We decided to grab a little shut-eye. After telling the fireman to bank his fire and after filling the boiler with as much water as it would hold, we both settled ourselves with some degree of comfort, because I knew we wouldn't turn a wheel for a long while. Soon we fell fast asleep.

When I awoke and glanced at my watch

I saw we had been tied up there for five hours, and still there was nothing in sight. I aroused the fireman and got the engine hot. Then I pulled up to the telegraph office and asked the operator where the last crew was. He said with a laugh:

"There is one crew this side of the telegraph office at the west end of Bluefield yard. I knew you were down there, and if he had passed the office I would have come down and told you."

I appreciated the information. We pulled up behind this crew and waited several hours more before we finally crawled into the terminal. It was a long and wearisome ordeal, although I had gone to sleep on it—something I never repeated in all my years of railroading.

New and larger power began to appear. One day, out of Bluefield, I handled the head engine of a cross-compound double-header, with fifty hopper cars of forty-ton capacity and, on the rear, ten hoppers of twenty-five or thirty tons. The latter were already becoming obsolete. While we were rumbling through Abb's Valley at about fifteen miles an hour an airhose burst on the second car from the caboose. The disorder that ensued beggars description. Never, outside of a wreck, have I seen rolling stock torn up so badly as were those ten small hoppers on our rear. Drawheads, end sills, draft timbers, even the whole end of some cars were strewn over the ground. We spent two hours chaining up the cars and getting them onto a siding. After that the whole lot of them were set afire and burned up, just the iron being saved.

FOR MILES along the main line and up the various hollows where the Norfolk & Western ran you could find coke ovens which served the steel mills. They were round at the top, with a circular hole in the center, through which crushed coal was dumped when the ovens were burning. The light which shone from these oddly-shaped structures at night silhouetted the occasional houses against the dark mountain sides and lit up the sky for miles around. It was an impressive sight. Now, however, coke ovens have ceased to exist in this part of West Virginia. Coal is hauled elsewhere to make coke.

Short tracks extended from the main line to various coal operations along the railroad. At a place called Delta a track ran for several hundred yards up to a mine, near which, at the bottom of the hill, was located a settlement of foreign-born miners. One Sunday about four p. m. our crew went into Delta to get the loads. It was a warm summer afternoon and the local inhabitants were in full force out enjoying themselves. Near the foot of the hill we noticed two chaps trying to fight. Older men kept pulling them apart but finally let them go, and then pitched into it

themselves. The scrap soon turned into a general melee, twenty-five or thirty men striking one another, evidently without regard for whom they were hitting.

One young fellow picked up a plank about three feet long. Running around the circle of fighting men, he apparently picked out neither friend or foe, hitting all alike on top of the head. Another combatant seized a rock and threw it at a neighbor. It struck him on the neck, knocking him flat. I feared the victim had been killed, but soon he was able to get up and resume his part in the melee.

An older man ran indoors. I thought he just wanted to get away from the disorder. However, he came out almost immediately with an axe in one hand. Half a dozen others rushed at the axe-wielder and forcibly hurled him back through the open door from which he had just emerged. This time he stayed in. Somebody must have phoned for the police, for a bunch of officers arrived just then and broke up the fight. They arrested several rioters, taking them to Welch on a passenger train that came by a short time later. I don't know whether or not to list this incident under the head of "a railroad man's amusements." It was like a circus.

SUCH EVENTS remain in my memory no less vividly than my experiences in the cab. And now I get back to business again. Going out of Bluefield one night with seventy-four cars, I handled the second engine. At Graham we found the board red, so the head engineer put on the train brake to stop. Then, unexpectedly, the operator pulled the board to clear. Releasing the brake affected the head end but not the rear, and as a result, the drawhead was pulled out of the first car behind my engine.

Now, at the tower a crossover extended from the westbound track to the eastbound, and about a hundred yards or more by the tower on the eastbound track a wye opened out on the main line. Cutting the head engine off, the crew dropped her below the tower on the westbound track. After chaining the car to my engine, I crossed over to the eastbound track and ran down below the wye. When they had thrown the switch I started to push the car into the clear, but had to stop because they could not get the derail over.

Where the switch opened on the main line a short bridge spanned a creek. My engine was standing partly on the bridge and partly on the wye, and there I stood for some time. At length, after getting the derail over, I pushed the car in and then started back up the main line. My train was standing about six or eight car-lengths from where I had put the car away. In those days, when trains equipped with air broke in two the air did not hold as long as it does today. Our airbrakes leaked off and the train began to roll downhill. The brakeman who had been left aboard told us later what he'd done when he discovered the cars were running wild.

"I asked the Lord to help," he said, "and I started to set brakes."

That was no easy matter, one man stopping seventy-three cars on a grade. If the train had not been halted it would have rammed my engine in the middle and shot her into the river; and I, with water underneath, would have had no chance to escape. When I got home I related the incident to my wife. She nodded with womanly intuition.

"I knew it," she replied. "I was putting the two children to bed at that time and I prayed for you, Al, as I always do. Coming out of the bedroom, I had a sudden feeling that you were in danger; so I went back into the room, knelt down, and prayed again; and the feeling of uneasiness was gone."

Thus, in some mysterious way, my wife's simple faith—and the brakeman's—had shielded me from destruction.

Elkhorn crews occasionally handled time freights from Bluefield to Eckman or Vivian. There the trains were set out for river crews to pick up and take on to their destinations. Now, in those days the official speed limit for freights was twelve miles an hour; but many a runner, including myself, exceeded that limit when it seemed to be necessary or advisable.

One spring morning I rambled down the Elkhorn Valley with a time freight, double-heading as usual but with the engines pointed forward instead of in reverse. I was making considerably more than twelve miles an hour. As I rounded the curve into Eckman I was frightened to see on the track ahead a light engine standing without flag protection. She was so close that I felt sure there'd be a collision. So I blew "down brakes," threw the air into reverse, and leaped—into a trackside ditch filled with yellow muddy water!

The second engineer on our train did likewise and we both wallowed through the mire like a couple of pigs. However, there was no wreck. The runner of the light locomotive heard my whistle blast just in time. Pulling his throttle wide open, he got her out of the way. Nothing was hurt except the personal dignity of two disgruntled engineers.

I REMEMBER that in 1913 the Norfolk & Western began to electrify more than fifty miles of double-track line west of Bluefield, completing the job two years later. Wires carrying a voltage of 11,000 were stretched for miles over the track for the use of electric engines. These wires very rarely interfered with the operation of steam power. One such occasion occurred on a day when I stopped at Keystone to get coal and in some manner the coal clogged up the chute. The wharf man stationed there ordinarily used a long iron rod to punch the congested mass and start it flowing again, but this time the rod slipped out of his hand and fell through a hole in the wharf across the charged wires, one end resting on my engine boiler. This caused a heavy ground, and the noise sounded like a battery of cannon fire, while sheets of flame shot out in all directions. It didn't last long, however, as the ground pulled the breaker out of the substation when the rod fell to the ground.

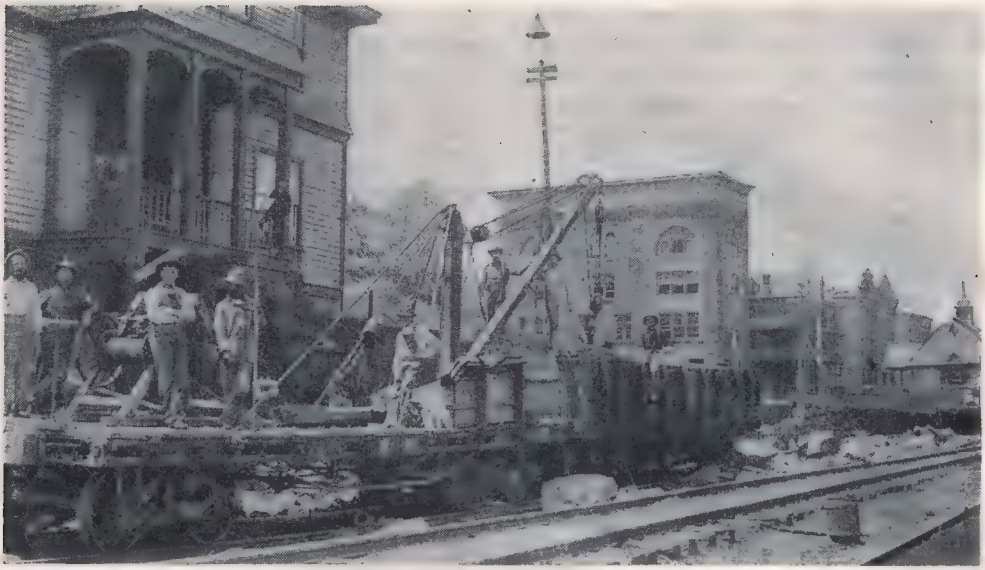
The coal trains we hauled over Elkhorn Mountain around that time usually consisted of twenty-five cars each of forty tons capacity. Three locomotives were needed to handle them, one on the head end, the other two on the rear. The last engine cut off at the mountain top and returned to assist other trains, while the remaining pair went on through to Bluefield. In those days the men did not make any air test, so it was just a guess as to whether or not things were all right.

Steaming out of Elkhorn Tunnel at Ruth one day with the Bluefield pusher on the rear, I topped the hill that slopes down to Cooper on a two-percent grade for a distance of a mile with a sixteen-degree curve at the bottom. When I made an application of the air to keep the train under control, I noticed that the pusher engineer, to whose locomotive the air was coupled, had failed to cut out his brake. Throwing my own into emergency, I blew "down brakes" as loud as possible, but still he showed no sign of having caught onto the fact that something was wrong. Every time I put the brake on, his engine would pump it off; and that train sailed downhill and around a sharp curve at the bottom faster than I ever wanted to ride.

I had gone over a mile at the foot of the hill before I got the train stopped. As it was perilous to go any further under such conditions, I walked back to the rear and told the engineer what I thought of him.

On another occasion the signal at North Fork was red as blood and I applied the brake. I had a little air, but as we were running upgrade I had no trouble in stopping. The front brakeman and I then ambled back and were amazed to discover that we had only four cars coupled with the air, an angle valve having been turned to cut off the rest. I had learned a valuable lesson. After that I never left a place where we had picked up a train without first applying the air and listening to the train-line exhaust, by which method I could tell about how much air we had.

Today Norfolk & Western men make air tests wherever it is necessary. Three powerful juice motors now haul trains of from sixty-five to seventy-five heavy loaded cars over the mountains at a steady clip of fourteen miles an hour. The smallest cars are fifty-ton capacity; many range from seventy to ninety tons.



OLD CRANE car used for yard work at Bluefield in 1888. Body is of multi-tubular construction. Note growth in number and size of buildings around depot, as compared with earlier photos

Unless you handled engines and trains a generation or two ago you cannot realize the poor holding quality of brakes in that era as compared with modern equipment. Airbrakes then were not looked after as they are now. In many cases the brake piston travel was not properly adjusted, and while they were far superior to the hand brakes they left much to be desired. The average locomotive was equipped with one nine-and-a-half-inch airpump. It took considerable time to pump up a train, not to mention a great deal of leakage at the airhose couplings. Boxcars were often sent in from other roads to load coke for western points, and the braking power on that equipment was poor.

ONE NIGHT when I was riding the head end, with twenty-five loads and two pusher engines on the rear, I stopped at Morgan for coal and water. After getting them I backed up and recoupled to the train. Blowing off brakes to let the pushers know I was ready to pull, I opened the throttle and this yanked out the drawbar from my engine tank. The only thing I could do then was to shift the Bluefield pusher onto the head end while I switched my own engine around to the rear, next to the caboose, with the other pusher shoving against the bumpers of my tank.

There was a crossover from the eastbound track to the westbound, at the coaling station, and a short distance from the rear of the train lay another crossover. I asked the head brakeman to throw the switches so I could run over on the westbound track. I also told him to set hand brakes on the train, which had little air, on account of which the airbrakes could not hold long. He promised glibly that he would. In order to make doubly sure that these brakes would be set, I then explained the same situation to the conductor. He, too, said the matter would be attended to. Just how many "binders" were tightened on that train you can judge from the events that followed.

I waited at the crossover. In a few minutes I saw the two engines coming with twenty-five cars—and coming fast! *Why are they racing like that?* I asked myself. The answer was not hard to find. Few brakes, probably none at all, had been set! Yelling to my fireman to watch the engine,

I made a wild leap onto one of the cars that were running away, and soon was tugging at the brakes, as were all the other men aboard. Down the eastbound track we rushed against the current of traffic, careening for some distance before we could get them stopped. Luckily, no nearby traffic was headed east at that time. Otherwise there have been another tale of torn-up equipment and slaughtered men.

Yes, potential trouble lays in wait for railroaders around every curve, on every grade, and often on the straight-away. You never know when you leave home whether or not you'll ever come back. I'm not superstitious, but I am not likely to forget the thirteen boxcars loaded with coke we picked up on a certain night after leaving Bluefield.

As I have said, we ran engines backward over the mountain so as to have them headed right when coming east with a train. On a curve just below Maybeury was a double-tracked bridge about two hundred feet long and ninety feet high. At its east end a tire on my right rear driving wheel slipped in, derailing the engine. I threw the brakes into emergency, but we stampeded across the bridge at a fearful rate. The engine rose every time we struck a tie-plate and came down with a heart-rending crash. I feared that any minute might be my last. The fireman, Ray Douthet, was so excited that he ran up and down on the tank, which had little coal on it.

Not knowing what would happen, I stood on the end of the tank with the intention of jumping to the other side if the engine should go down. There was more than a feeling of relief when we stopped with our thirteen cars at the extreme west end, and you can bet I breathed a prayer of thankfulness.

A few years ago a freight roared down this mountain out of control and its big Mallet turned over on the same bridge, plunged into the gully below and exploded, blowing the huge boiler more than a hundred feet up the track. Fifty-two cars were dragged down by the falling Mallet and most of them burned up. The engine crew were killed instantly and the front brakeman went to glory several days later.

WHEN the twelve-wheelers now listed in Class M first came to the Norfolk & Western in 1906 from Baldwin and Richmond they were well received by all of us. I was assigned the 379. These engines were larger, sturdier and heavier than any we'd had hitherto. How capably they performed is shown by the fact that the old girls are still in active service more than a third of a century later.

Back in 1906 the clear indication on signals and switch lamps was white—it has since been changed to green. Company rules at that time required that a white light be placed on the back of the tank of all yard-engine tanks that did not carry a headlight. Since there were no floodlights in yards then, the chief source of illumination at night being the glow of lanterns and headlights.

One evening I was backing the 379 out of Bluefield with fifty-nine cars of time freight. The conductor was seated on the engine-cab deck on the right side, his feet resting against the tank, while I was standing erect and looking out the window. I saw at the scale house in the west yard a switching engine that evidently had just come out onto the main line and was waiting for something or other, but nobody stood near her with a lantern. Those goats had small tanks of 3000 gallons capacity that were not high above the ground, and a platform on back of the tank containing a white lantern. I observed this lantern, of course, but because my own locomotive was so much higher than the other I mistook the lamp for a switch light. Too late I learned the truth. By that time I had hit the smaller engine with considerable force, breaking her tank in two and putting her into such a state that it took the yardmen an hour to get her off the main stem. The 379 was not damaged at all.

Talking to the trainmaster a few days later, I criticized the rule that only required a switcher in the yard to carry a white light on her tank.

"It's a poor arrangement for trains on

ONE OF THE FIRST N&W MALLETS was the 998, which I ran for years. My fireman, James Burton, stands on the running board nearest the cab, with me beside him. Others are trainmen or crew members of the engine with which the 998 was doubleheaded

the main line," I said, "not to have any more warning than that."

The trainmaster admitted it was pretty much of a death trap. That's the last I heard on the subject, but it wasn't long before they began putting red lights on the rear of yard goats sent out onto the main. As a result, yard operation is safer.

Number 991 was the first Mallet that came to Bluefield. I took her out on her maiden run, to test her steaming and hauling qualities. We made several trips and had to do some adjusting on her front end. Gradually more Mallets arrived.

One day I again got the 991 and picked up a train of forty loaded cars, with a Class M locomotive pushing.

Getting close on the time of Number 2, a passenger train, I pulled into Morgan passing sidetrack, where the 961 was cut off so I could get water. We were going to receive another pusher, the 992, and couple onto our filler at a nearby mine. When we stopped, the brakeman failed to set hand brakes. After we had stood there for some time I looked toward the train and saw it was moving backward down the sidetrack at about eight miles an hour. I never felt sicker in my life as I did just then. I thought my train was gone and did not dream the little engine and the flagman could stop it without running into that passenger train.

But in a few minutes my train was standing still—it seemed like a miracle! The brakeman promptly galloped down and set hand brakes, thus ending the trouble. I have always believed that the train was brought to a halt because there was some air in the brake cylinders, and the flagman who jerked the angle cock open on the rear so the brakes could be applied hard enough to take effect.

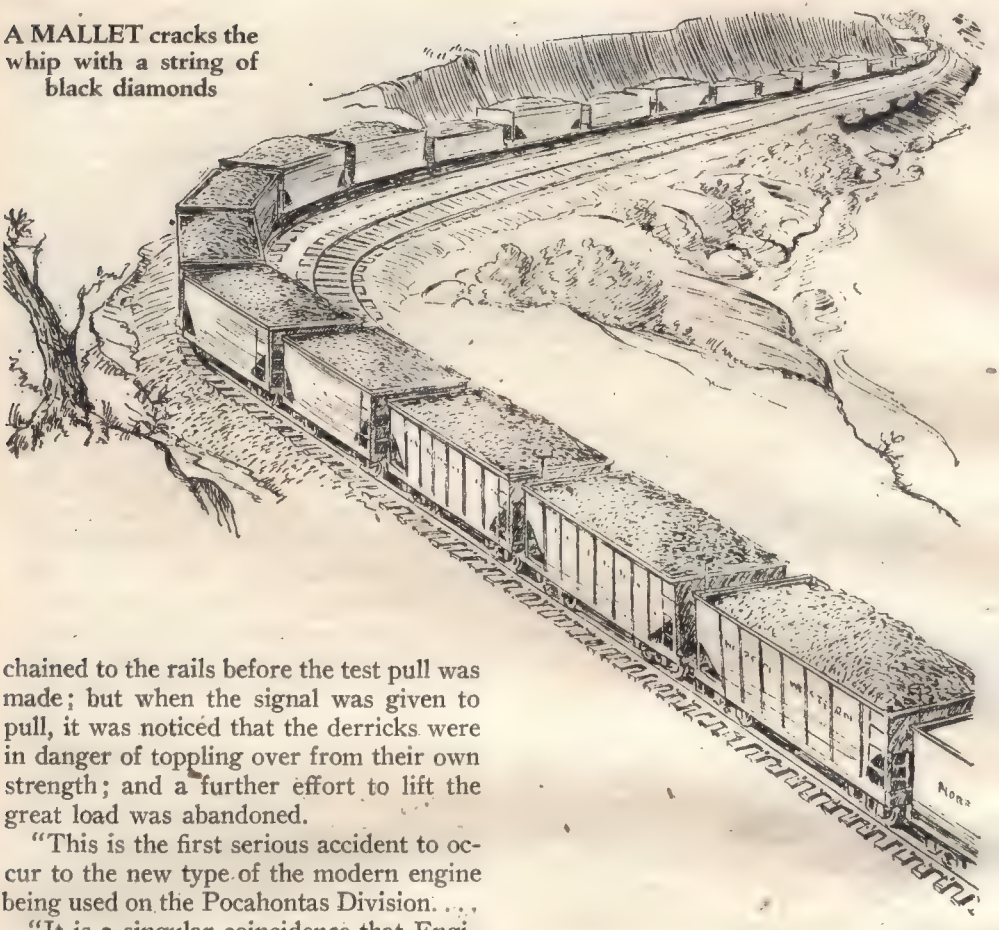
The cabs of these Mallets were open at the back end, with a heavy canvas curtain that could be rolled up or let down. However, when we traveled backward in wintry weather the curtains thrashed about so badly that they were little protection and the men nearly froze. One cold night I laid off and an extra man took my regular engine, the 998. When I returned to work, I noticed that the floor on the right side of the cab was badly charred. The fireman explained, in answer to my question, that intense cold had compelled the crew to build a fire on the iron floor of the pit at the firedoor to keep warm, and this had charred the cab's wooden floor.

GOING OUT of Bluefield early one morning with the 998, I got a train of time freight at Eckman and came back as second Number 84. What followed was told in the Bluefield *Daily Telegraph* of October 18th, 1910, under the headline "Huge Mallet Engine Wrecked:"

"The wreck of the Mallet on the Norfolk & Western at Graham yesterday morning furnished plenty of excitement for a while, and the unusual spectacle of a huge engine lying with her wheels turned up to the sun attracted a large crowd to the scene of the accident. The engine, No. 998, was drawing a section of time freight, No. 84, and the fact that the train contained fresh meat to be re-iced at Graham probably saved the lives of those aboard the big engine when it left the track and turned its nose toward Bluestone River just a few steps west of the bridge opposite the Mitchell Mattress factory.

"It was discovered after the accident that the pony trucks had climbed over, which was the cause given for the accident. Engineer Al Hock, Fireman C. L. H. and brakemen L. and W. were riding on the engine when the accident occurred, and that all of them escaped instant death or serious injury was considered little less than miraculous. Engineer Hock received a sprained ankle in jumping, while Brakeman W. had his hip slightly bruised in the same manner. The big engine turned completely over on the steep embankment and entirely cleared the track. . . .

"A temporary track was constructed in the bank on which it was intended to lift the wrecked engine, but it was found that it will be necessary to further excavate in the embankment and build a track as near under the engine as possible in order to turn her over on the rails, provided the two steam derricks were braced and



A MALLET cracks the whip with a string of black diamonds

chained to the rails before the test pull was made; but when the signal was given to pull, it was noticed that the derricks were in danger of toppling over from their own strength; and a further effort to lift the great load was abandoned.

"This is the first serious accident to occur to the new type of the modern engine being used on the Pocahontas Division. . . .

"It is a singular coincidence that Engineer Hock, who was in charge of the wrecked engine, ran the first Mallet that was put in use on the Norfolk & Western road. He is a safe engine driver and he owes his life to his alertness while running his engine."

For several years after that I stuck to the Elkhorn job. Then an easier run showed up on the Iaeger local and I snapped it up. This was a daylight assignment having only one engine, short trains and no Sunday work—the kind of job that any home guard with a wife and children is glad to get.

Eastbound one day on this run, we had 1200 bags of flour, each weighing twelve pounds, to unload at Davy. I sat in the engine and viewed the unloading two carlengths away. One trainman stood inside the car, another at the door and a third on the ground, and the flour sacks kept coming out of that car fast. Two ladies happened to pass, unseen by the men. A bag sailed out the door, striking one of them on the neck, bursting, and powdering her from head to foot. The young woman's first impulse was to laugh. Then she flushed angrily and let loose the worst tongue-lashing I've ever heard given to a freight crew. The incident amused me, watching from the side lines, but I can assure you it was no fun for the trainmen.

I HAD BEEN on this run for years when they put a local on the Clinch Valley that ran between Bluefield and Richlands, a distance of forty miles. This job laid over at Richlands on Sunday, as did two other runs. As there were no facilities for washing the boilers on these other en-

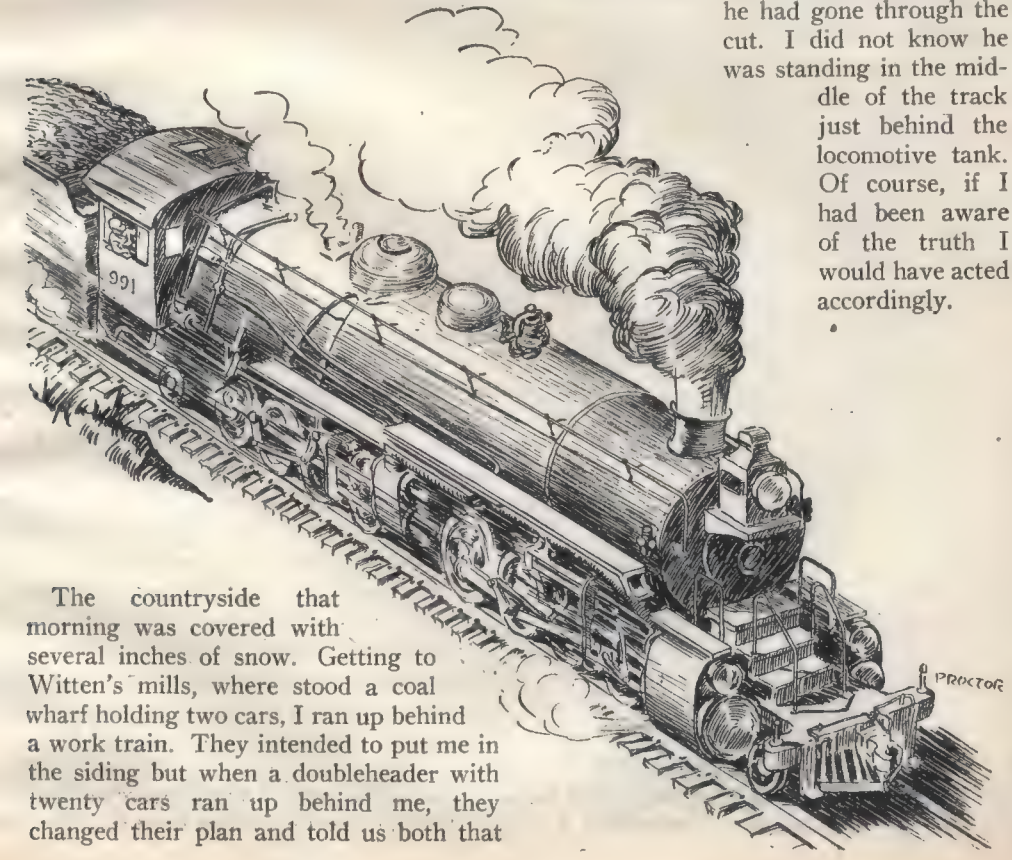
gines at Richlands, they would run one of them in every Saturday night, each one taking her turn for boiler wash. The men who handled these engines lived at Richlands. Not wanting to be away from home, they would let my fireman and me bring the engines in, which gave us a much longer time at home, as they did not run us back until early Monday morning.

Arriving at Bluefield on this trip with the light engine, my regular fireman laid off and I was given an extra fireman on Monday morning. When I reported at the roundhouse the caller handed me a letter for this man. I had, of course, no means of knowing what was in the message, short of opening it, and was not interested anyway—until later, when I found out that it was a letter of discharge. Thus a discharged man went out on the engine with me. He had been drinking and had made such a nuisance of himself that he was summarily fired.

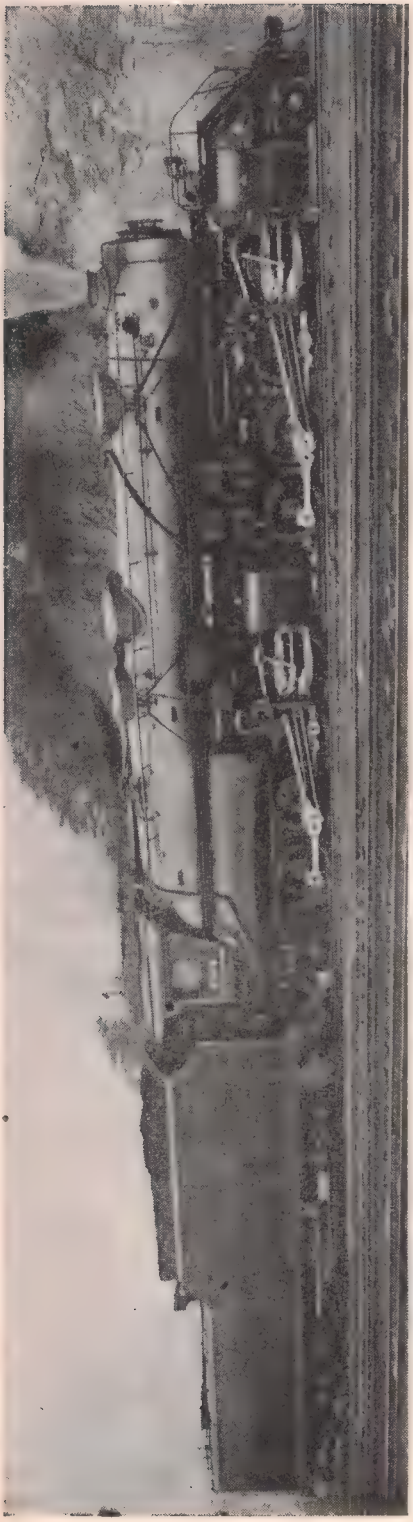
they would back up to Burke's Garden, a passing siding several miles below, and then would let us both by.

Burke's Garden has a cut on a curve twenty car-lengths east of the switch, and the rules require trains to come into passing sidings under control. Rolling through the cut, I saw the work train, which had at least six cars, standing at the switch. They'd had some trouble in getting over the switch on account of snow. I told our fireman to grab a red flag and go back against the other train. I saw him get off the engine and start walking.

Shortly after I had left Bluefield the right injector played out and I was using the left one. When the flagman started back I went up in the right side to see how much water there was in the boiler and then on the left side to shut off the injector. Next I glanced back on both sides of the engine to the cut. Not seeing anything of the fireman, I naturally supposed he had gone through the cut. I did not know he was standing in the middle of the track just behind the locomotive tank. Of course, if I had been aware of the truth I would have acted accordingly.



The countryside that morning was covered with several inches of snow. Getting to Witten's mills, where stood a coal wharf holding two cars, I ran up behind a work train. They intended to put me in the siding but when a doubleheader with twenty cars ran up behind me, they changed their plan and told us both that



NUMBER 2124, a superb example of modern articulated steam power on the Norfolk & Western

About that time the doubleheader came rushing out just ahead of the cut. Instead of being under control, it was running twenty miles an hour; and in a few minutes engines and cars were piled up in a nasty mess. The only thing they could get against me was that I had not blown the whistle to send out the flag, but had told him to go back. I got thirty days on my record.

In 1918, as the desirable steam runs out of Bluefield were few, I took an Elkhorn run again. The motor power had been changed from steam to electric. They now had yard crews to switch out and assemble the loads, a lot of them being taken to various yards and the balance left on mine tracks. As one engineer said, "When you quit steam service and go into electric, the only thing necessary is to forget all you knew about steam and learn about juice;" but the Lord was with me, and in a few weeks I was handling electric engines as though I had been on them for years.

ON ANOTHER occasion I was called for an electric pusher going to Flat Top to take trains to Bluefield. When we arrived there, we found nothing to push; so we got in the middle track to wait for a train. When it finally came, the indicator was red. However, the shifter had just gone down where we were and back up the westbound track to the pump house. We could see him standing on the main line. The flagman of that crew threw the switch to let us out. I ran down the main line below the crossover, cut the master controller and brake out of the cab where I was; and the helper, an experienced man, cut in on the other end of the cab where he was.

Electric locomotives on the N&W consist of two large units like streetcars coupled together and can be run from either end. A large Mallet engine had been standing near the pumphouse behind the shifter which had now gotten in the clear and let her go by. Coming down the westbound track, there was a sharp curve at the west end of the yard. The fireman on the Mallet could see the auto-

matic signal over the hilltop but could not observe our engine at the crossover; so he called, "Clear block," to his engineer, who could not see ahead because of the curve. He didn't look out any more, evidently taking it for granted that there was nothing in the way, and worked on his fire.

My helper had run over the crossover, with part of the engine on the eastbound track and part on the westbound. I was waiting for the flagman to throw the switch. Why he did not see the Mallet and blow her down, I do not know; it was daylight and there was nothing in the way. He stood there until the Mallet struck the electric engine, turning the back cab over on its side.

I could not see the Mallet from where I was, and could not imagine what was happening even when the cab started to topple over. Looking back through the glass in the cabdoor as it was struck, I seemed to see a million splinters filling the air. A toolbox, another small box, dinner buckets and a bench stood in the end where I was, and as I teetered off my feet these things were flung at me. I fought to keep from being thrown out of the window under the engine. The Mallet had a cylinder torn off. Both tracks were blocked for a long time, until the wreck cars got them straightened out.

Electrics are so much nicer and cleaner than steam engines that I've never desired to go back to steam service, although some men complained of the vibration caused by electric machinery such as phase converters, air compressors and water pumps, saying it got on their nerves. I grew so used to this vibration that I never even noticed it unless someone complained. Occasionally, we got some rather severe jolts from the current while looking for trouble, although everything is protected as much as it can be.

I was wheeling uphill one day into Bluefield when a hard thunderstorm was raging and lightning struck the engine just above our heads. It frightened the helper, Jack Bowles, so badly that he jumped off his seat from the left side over on top of me. Ordinarily such things do not harm the enginemen but pass off in a big ball of fire over the wires. On winter nights, sleet on the wires creates an effect that is beautiful but terrifying to those who are not used to it. I refer to the heavy arcing of pantagraphs as they pass over the ice, lighting up the heavens and the earth.

SHORTLY after the first World War, cars of ninety-ton capacity began to be used on the N & W in large numbers. We called them *titanics*. On some the drawheads had quite a bit of lost motion up and down. At times these drawheads would slip over, one raising up and the other pulling down, forcing the train to part by making a hard stop on the rear.

I'm thinking now of the morning out of Bluefield when I had a train of forty titanics, with several twenty-five-and thirty-ton cars on the rear. At Bluestone the double-tracked main stem starts up a grade and the Bluestone branch leads off from the main, paralleling it for a short distance. After I had started up the main, the drawheads of two titanics, ten cars from the head end, slipped over each other, breaking the train in two. The brakes going into emergency on the upgrade caused the front end to stop almost instantly, but on the rear three small cars were picked up and thrown across the eastbound track onto the branch line.

As you probably know, caboose stoves are secured to the floor with long bolts that run from the top. In this case the impact was so violent that it tore the iron stove loose from the floor. It is hard to understand how, under such circumtances, the rear-end crew generally manage to avoid being badly hurt or even killed. I do know that when trainmen are seated in a caboose their common practice is to keep themselves braced against jolts.

We went out of Bluefield one day on a Flat Top pusher. When we arrived there we found that the train we were to push had been pulled by the crossover at the east end of the yard. After telling my regular helper to stop the engine below the crossover, I walked through to the east end. And then I neglected to do some-

thing I have never failed to do before or since. I did not cut the brake in.

Running slowly over the crossover so as to pick up the flagman when he had thrown back the switches, I started up to the caboose, which was about fifteen car-lengths away, at a fairly fast speed. When we got up close enough, I pushed the handle of the brake valve around. At once I discovered what I had left undone. Like a flash I cut the brake in and threw the brake valve into emergency. It did not check the speed.

The conductor, standing on the back platform, saw the engine rushing toward him. He jumped off and ran down the bank toward the river. I reversed the engine, jerking the accelerating lever wide open. The engine stopped as though she had hit a mountain. In a few minutes my helper, Homer Hall, who had been eating his lunch at the other end of the engine, came over.

"What the blazes are you doing?" he demanded. "I put a biscuit in my mouth and you threw it down into my stomach."

I left Bluefield one evening with 125 cars, all of which I set off over in the field, except four boxcars that we were going to take to Iaeger. I had the 2514, one of the largest motors, weighing more than four hundred tons. As I came to the siding at Pando, the track ran out of a cut onto a short river bridge into a short tunnel. Near the bridge, while running twenty-eight miles an hour, I saw something I could not make out at first.

Then as we drew nearer I observed it was a large heavy tie that had been put against the rail, wedged into one side of the bridge. Obviously, someone had deliberately tried to wreck a train. Shutting off power, I threw the brakes into emergency, just in time to prevent the engine from being derailed, although she was jarred violently. We stopped down in the tunnel, then walked back and picked up the pieces of tie, which we put into the caboose to save as evidence.

Three days later the would-be train-wrecker was arrested, and eventually was given three and a half years behind the bars.

SOMETHING was always happening on the Pocahontas Division. Take, for example, the time when a certain dispatcher who lived at Graham got on my engine at about 11:30 p. m. to ride home. Backing into the caboose track, I coupled onto fifteen or so hacks, ours being on the rear. The switch-stand light was out. When I pulled into the main line, the dispatcher was standing over me and talking. I got a signal to throw our caboose up the main stem. So I pulled ahead far enough, stopped and got a slow back-up signal. However, thinking I was going into the caboose track and with the dispatcher taking my mind away from my work, I came back fast, not looking out as I should have been. The string of hacks had parted—those on the rear having brakes on had stopped—and I struck them hard. At first I couldn't see anything because of windows, stove pipes knocked off, and the platform of one little four-wheeler smashed down on the track.

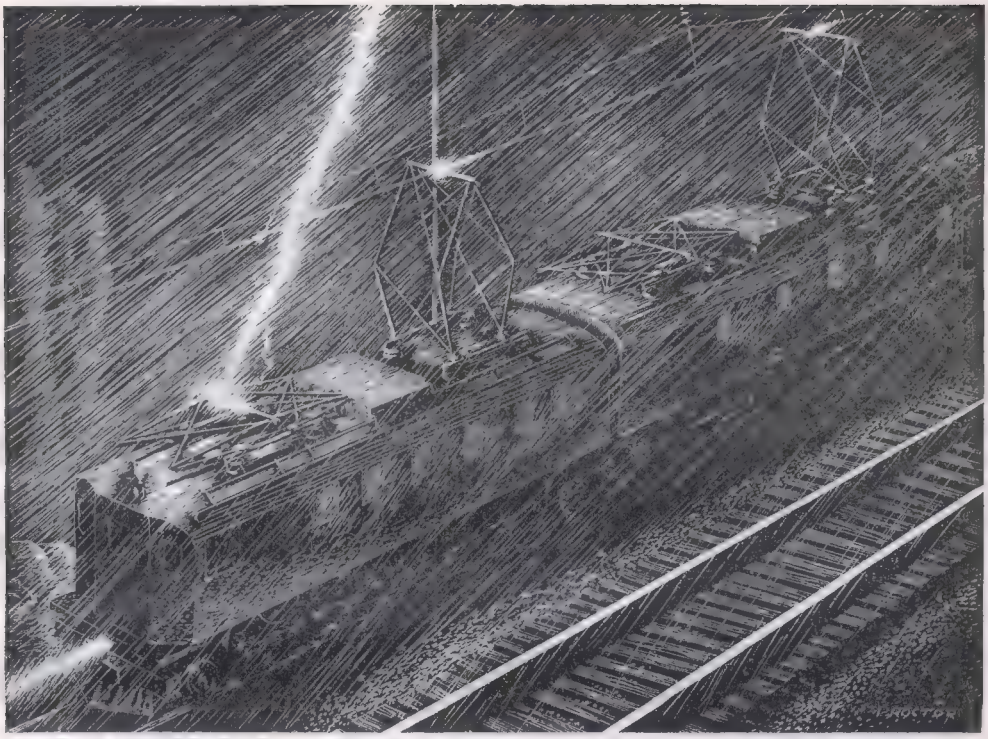
When we came in at the end of this trip the conductor said: "Al, you'll have to make a statement about those torn-up cabs."

I nodded. "Yes, I know. I'll give it to the terminal trainmaster."

So I wrote up a statement. I explained that I had gone into the track to haul out the cabooses, and what signals I had received, and said the switch-light was out, which fooled me into believing that I was going back into the caboose track. At the bottom I added, "No one but me is to blame for this," and signed my name. There the matter dropped. I never heard a word about it from any official.

Six months later another engineer, with the same dispatcher leaning over him in conversation, smashed a lot of cabooses at the very same place. He tried to put the blame on the train crew, but was suspended for twenty days with pay.

Yes, railroading has its unpleasant side. Which reminds me of a winter morning when the thermometer was flirting with zero and I was handling only an engine and caboose out of Bluefield. At Graham I noticed that both the main-line and order



I WAS WHEELING into Bluefield during a thunderstorm when lightning struck the engine just over our heads

signals were set at clear, and I did not see anyone waiting at the telegraph office, so I opened the throttle to twenty-eight miles an hour. Picking up speed, I had gone less than a hundred yards when I happened to glance back and spied a man bursting out of the office vigorously waving a red flag. I came to a halt and waited till he came up.

The man said: "I'm flagging for bridge 834."

Now, this enraged me. If that fellow had been on the job instead of keeping out of sight in the depot I would not have been forced to make an emergency stop, nor would I have come very near running into the bridge gang at work.

"I don't blame you for wanting to be warm," I said angrily. "It's cold this morning; but why didn't you have the operator hold the board on me and not let me get by you like that?"

A little distance further on the track curved around a high bluff. I soon came to the place where I could see the bridge, only a stone's throw away and was more than furious at what I saw. The rails were jacked up two feet above the bridge, twenty or more ties had been removed, and twelve or fifteen men were working on the bridge. If I had not casually glanced back when I did and had not seen the negligent flagman I would have run onto that bridge at full speed, no doubt killing or maiming most of the men on it; the locomotive would have plunged into the river, with the helper and me trapped under it, and the men in the caboose also would have met death or been injured.

ON NOVEMBER 14th, 1897, I joined Division 448 of the Brotherhood of Locomotive Engineers and have been a member ever since. At the end of 1937 I received a forty-year button and in January '42 my life membership card in the Brotherhood. I would not have railroaded without belonging to it. In 1942 I also

obtained a membership card in the Norfolk & Western Veterans Association. I am proud to belong to both organizations.

Although I had gone to Sunday school as a youth, I was not converted until one unforgetable day when I went to Norton on a doubleheader with Engineer Pate, for whom I fired many a run. I was very quiet on that trip, but my brain was in a turmoil. At length I found peace by getting down on my knees on the right side of the cab of that rolling locomotive and making the great decision to become a Christian.

I could relate numerous experiences of the joy and exaltation that have come to me as a result, for I am not ashamed to testify for Jesus Christ. Again and again I have come close to death without ever being injured except to lose a finger nail and sprain an ankle; and during all those years I have sensed that angels were around me, shielding me from harm.

If magazine space were unrestricted I'd like to tell you more about my faith and how it has helped and sustained me; but I can see the yard-limit board now, so I will close with an account of my last run on the N & W.

The date—will I ever forget it?—was Saturday, November 29th, 1941. I awoke early that morning, knowing it would mark the end of my rail career, and dressed with unusual care. My wife came down to the Bluefield station that afternoon to see me off. My last engine was an electric,

Number 2510. I took a train of empties to Wilcoe, where I picked up a train of loads to bring back to Bluefield. The dispatcher had tipped off the boys to the fact that this was my swan song. As I passed the tower at Tug, the operator handed me a message which I thought was instructions about my work. Instead, I was agreeably surprised to open it and read:

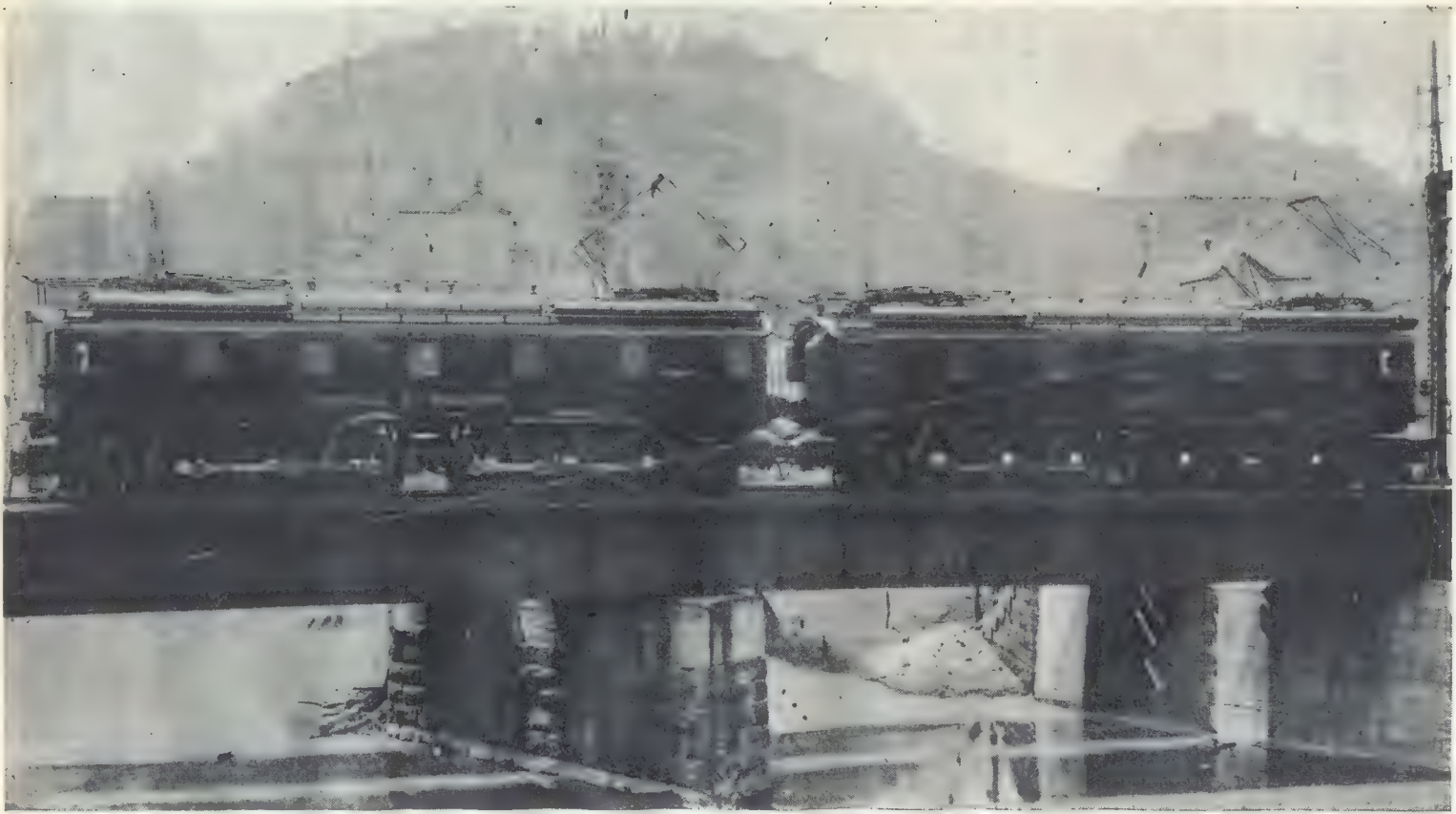
"Mr. Hock: Good luck and best wishes.—B., opr., Tug tower, Nov. 29, 1941."

I was further surprised upon reaching the Eckman yard to find the office force lined up along the track waving at me and shouting their best wishes. This touched me deeply. One man handed me a message which stated:

"Engineer Hock, Extra 2510 East: In consideration of the importance of this, your last run, we wish to take this opportunity in congratulating you in attaining the height of a successful career. May the years of your retirement be many and running over with good health and happiness. —Eckman Yard Office Employes."

This reception was repeated as my engine clicked over rail joints and stopped at one point after another. At Coaldale tower on top of the mountain I received several more messages. A strange feeling of tri-

POCAHONTAS COAL supplies power for the generation of electricity used to haul this train of Pocahontas coal



LC-1 MOTOR on one of the numerous steel trestles over Elkhorn Creek. They are used principally to assemble mine pickups and wheel them into Bluefield

umph and sadness filled my soul as I read them, one after another. The Coaldale operators wrote:

"We shall miss you, but hope your years of retirement will be full of peace and contentment."

They had declared, "We shall miss you." I wish they could have known how much I would miss them, too, and every milepost, every signal and every section of rail on the Pocahontas Division! At Bluestone I was given this greeting from the powerhouse employes:

"We wish you the very best of luck on your retirement for the faithful service you have rendered during the many years of service for the N&W Railway Company."

Thus all along the line I was felicitated by the men whom I had worked with and had grown to love. One operator at Bluestone stated:

"I am sorry to know that this is your last night with us. I hope you have a long and happy vacation, and enjoy the very best of health."

Another contributed these words which I have since treasured as the balsam of Gilead:

"We will always remember you as a real friend and an excellent railroader."

It was forty-two minutes past midnight when I reached HQ tower, the last telegraph office before I pulled into Bluefield. The towerman there handed me a final clearance card. It said in part:

"Clear block. Signal is displayed for operator and you and the following message: Just heard a few minutes ago that a long and, I am sure, a happy run over many, many miles of steel rails is just about completed, but I am sure that you have many, many more miles ahead that will be just as happy. It has been a pleasure to work with you, and I am sure the other boys feel as I do."

That run ended much too soon. When I placed the locomotive on the motor pit, my helper and the shopmen shook my hand with the customary congratulations. I filled out a time slip early that morning, signed it, and wrote underneath, "Last trip—good-bye." After that I dropped in at the call office to bid the boys farewell. A conductor with whom I had often worked made this comment:

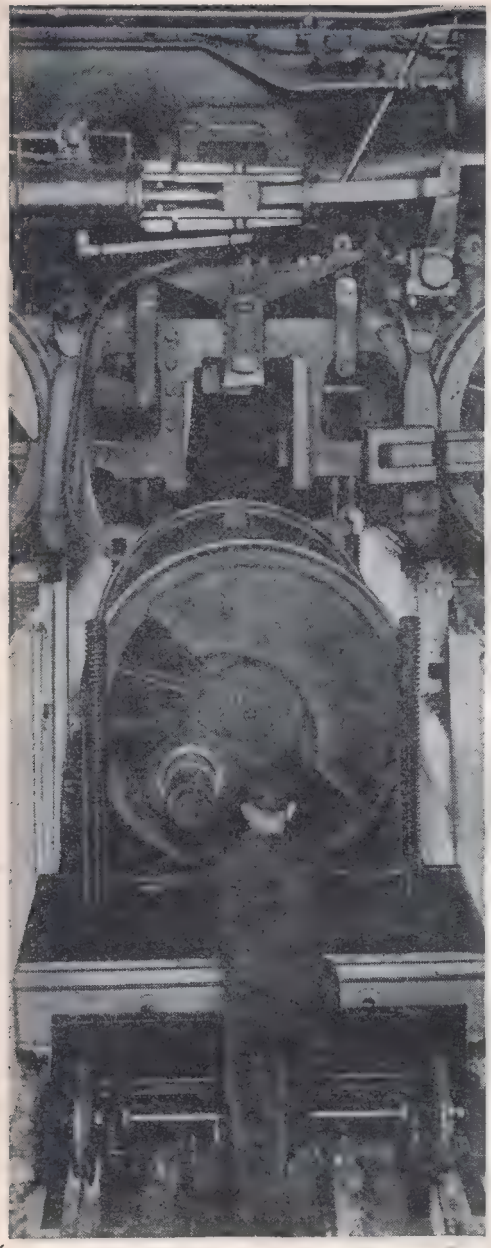
"When I heard it was your last trip, I half expected you to lay off for fear something might happen."

I replied: "I didn't feel that way about it. I knew that God was just as able to watch over me on the last run as He was on the first."

A few days afterward the timekeeper wrote to me:

"I saw the notation on your time slip of November 30th saying it was your last trip. It has been my work to handle the Pocahontas Division time slips for several years and I want to commend you for the manner in which you have rendered them. I do not recall having to return any of your slips for correction. I also wish to congratulate you and hope you may enjoy a well-earned rest. . ."

Thus ended my forty-eight and a half years on the Pocahontas Division. For me the N & W is now a memory road. I have no regret that my railroading is finished, as I feel that I have done my share of the world's work.

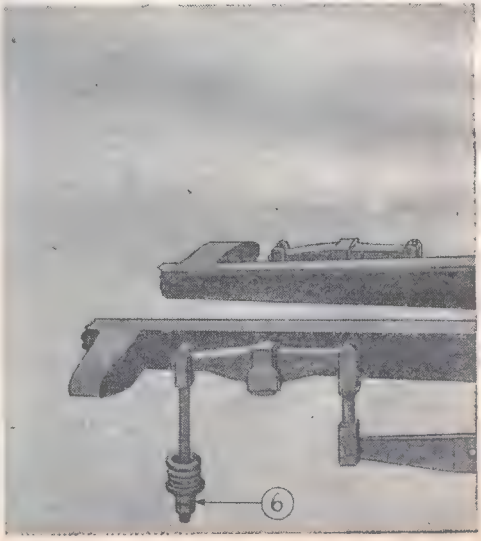


ADEQUATE springing and equalizing are vital to smooth, safe running and proper adhesion. ABOVE: lowering driving wheels into a drop-pit. AT RIGHT: Springing and equalizing scheme: 1—Spring Saddle, 2—Reverse-Camber Leaf-Spring Assembly, 3—Dead-Ending Coil Spring, 4—Driving Box, 5—Equalizers

MEN who handle the throttles of fast trains know the important part which spring rigging plays in the maintenance of schedules or in getting heavy drags "over the hump" in a safe manner. For anyone who has run steam locomotives very long has had the experience of seeing a spring hanger break. Sometimes there is a derailment; almost always a hot bearing; and under the most favorable circumstances speed must be drastically reduced until a terminal can be reached and another engine obtained. During those miles when the crippled machine is being brought in, the hand on the brake valve must be ever on the alert for a sudden stop, especially while passing over frogs and switch points.

There are countless reasons for spring and rigging failures. Because it is the business of these parts to transfer the weight of the boiler and frame to the driving boxes, they are subjected to great wear. With a small machine, like an auto, the weight can be removed and grease or lubricant injected between the pins and bushings of spring rigging. Too, the springs themselves are covered and packed with a graphite grease, reducing the friction between the leaves to a minimum. This cannot be done economically in the case of a locomotive, where many

Spring Rigging and Equalizing



precious hours would be required to make the springs accessable and to ease the tension on them. Instead, pins and bushings are hardened and renewed if badly worn. When business is brisk they are sadly neglected.

Numerous other factors lead to failure. All metal weakens with age and it is not unusual for the leave to slip in the band, or for the leg of a spring saddle to become uneven at the box-seat, causing the hanger to foul the main frame. This results in chafing, which reduces the thickness of the metal until it is unable to stand the strain for which it was designed.

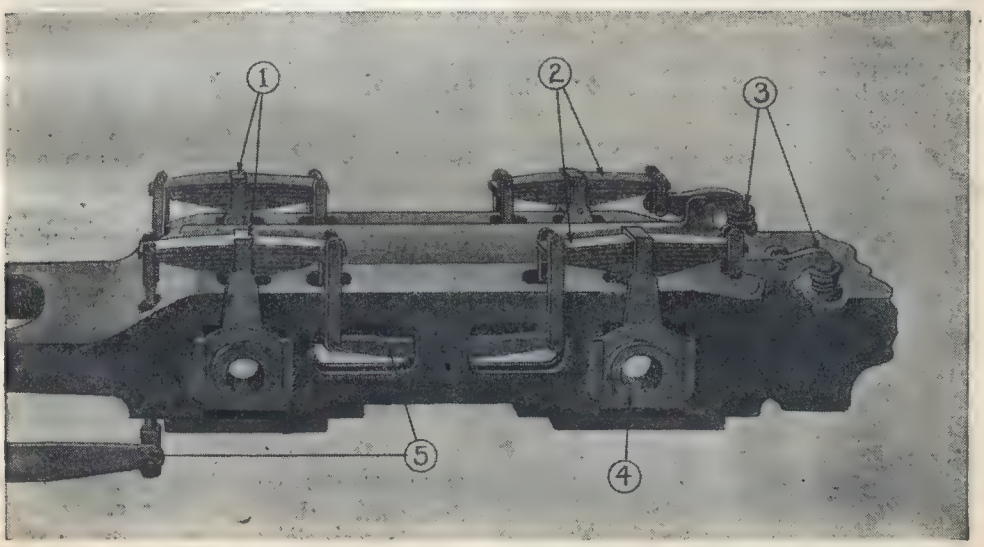
Similarly, minute flaws may progress with wear. Sometimes the track is not in perfect alignment. This is particularly true in the early Spring and Fall, when the frost is either leaving or entering the ground. Shop records show that by far the greater number of spring rigging failures occur during these two periods.

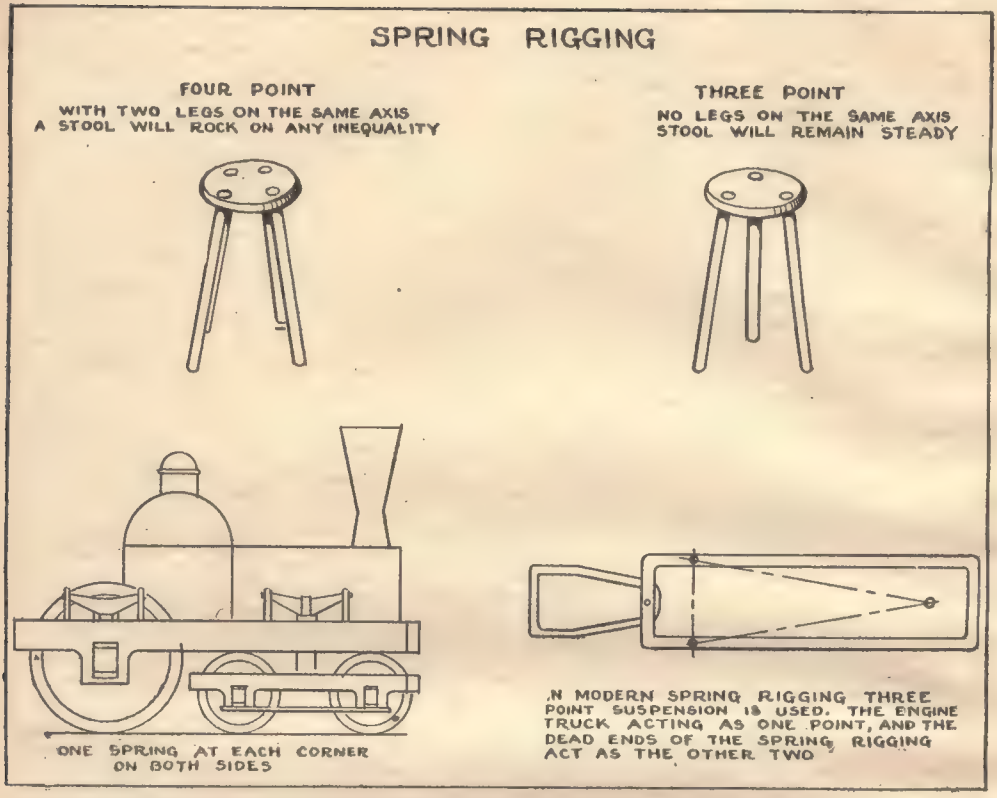
IN THE EARLY DAYS of the locomotive, springing was of universally simple design. Over each driving box was placed a leaf-spring assembly or coil, to bear the weight at that particular point. The same construction was used for frame-mounted guiding or trailing wheels. No attempt was made to spread the impact upon any one spring over the entire assembly. As a matter of fact "equalizing," as we call it, was not greatly needed with the short wheel bases and low speeds then in vogue.

Then along came John Jervis with his flexible engine truck of 1832. Jervis' one thought was to guide the locomotive around sharp curves with a minimum of shock. In doing that he made use of what we have since come to call "three-point suspension." Since this principle plays a fundamental part in our story, let's see how it works. Referring to Figure 2 we see that whereas a four-legged table will not always rest upon all of its supports, a tripod arangement will. With a light piece of furniture this fact is of little importance, but in the case of heavy machinery moving over an undulating roadway, its significance looms large. Three-point suspension had to come, regardless of the invention of the engine truck. Combined with equalization, it insures maximum flexibility with controlled load distribution.

With the exception of yard goats all of today's engines use this principle of construction. At the front-end, under the cylinders, there is one support, namely the center casting of a two, four or six-wheeled truck. The other supporting points are along each side

Light of the Lantern




SPRING RIGGING
FOUR POINT
WITH TWO LEGS ON THE SAME AXIS A STOOL WILL ROCK ON ANY INEQUALITY
THREE POINT
NO LEGS ON THE SAME AXIS STOOL WILL REMAIN STEADY
ONE SPRING AT EACH CORNER ON BOTH SIDES
IN MODERN SPRING RIGGING THREE POINT SUSPENSION IS USED. THE ENGINE TRUCK ACTING AS ONE POINT, AND THE DEAD ENDS OF THE SPRING RIGGING ACT AS THE OTHER TWO

as shown in Figure 3. Looking at Figure 4, we see the general arrangement of springs over the driving boxes through which the axles pass. On top of each driving box, in turn, is a saddle upon which rests the spring. Hangers then connect the ends of the springs to the frame or equalizers.

What actually happens as the engine moves over the rails? To illustrate, we'll assume that there is a high spot in the track on the right hand side. Number 1 driver hits this and the driving box raises on the shoe and wedge. This lifts the saddle and also the spring, whose tempered leaves dampen the blow as they bend. At the same time the rear hanger raises, moving the equalizer between Number 1 and Number 2 drivers. Thus, some of the shock is transferred to the remaining springs and the Number 2 driving box is thrust downward, making for a speedy and broad-spaced readjustment of load. As the remaining wheels pass over the high spot the action is repeated at successive driving boxes. With three-point suspension it does not matter whether the inequality is on one side or the other or both. At all times hangers will carry their weight, as does the engine truck. This last unit, when similarly broken down, shows the same characteristics of design.

INVERTED semi-eliptical spring and dead-ending shackle at rear of Pennsylvania Consolidation type locomotive

COIL SPRINGS, because of their ease of manufacture, cheapness, and ability to withstand enormous stresses without failing,

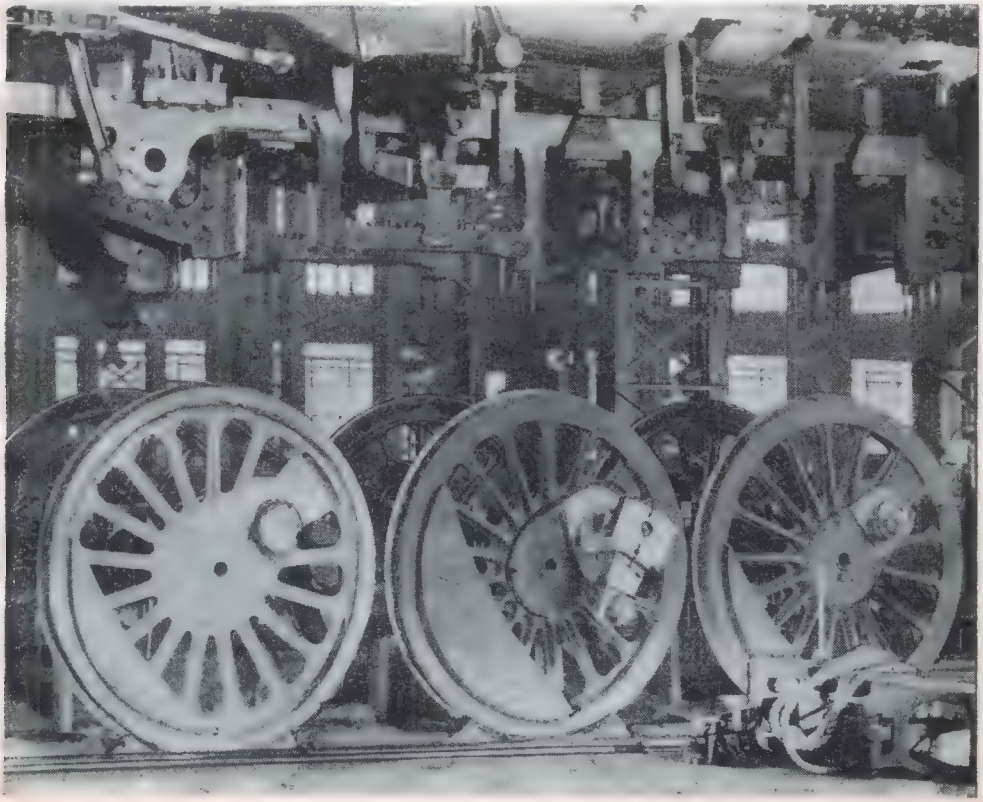
have been employed wherever construction permits, and today many engine and tender trucks use them. Unfortunately, however, they have a tendency to expand with the same force required to compress them and this produces a jouncing vertical action known as harmonic vibration, which may build up to a dangerous extent as train speed climbs into the higher brackets. Snubbers have been used with some success to break up the rhythmic motion, but coils still have no place on the steam locomotive driving-spring arrangement, except at the points of dead ending, or occasionally at the hanger connection with the trailer equalizers. Here they have been found excellent for lessening heavy perpendicular shocks.

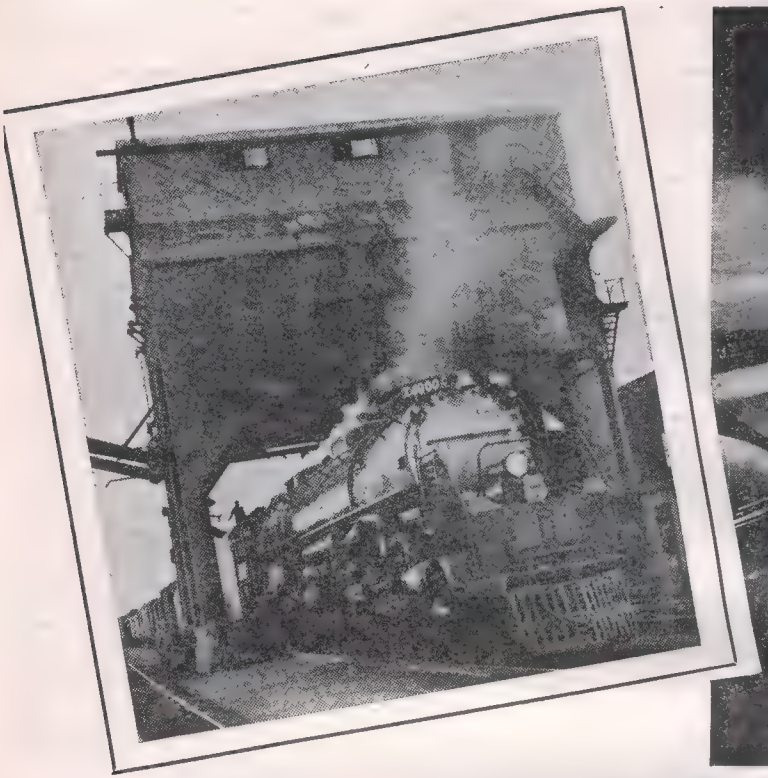
Practically all driving springs used today are of the semi-eliptical type. The leaves are exceptionally heavy and well banded, with an insert at the ends for the hanger connection. Until recently each leaf acted as a simple lever with the fulcrum at the center. However, this produced a slight shearing stress at the band, which resulted in many leaves failing, or being condemned under a Federal Government law that states that no spring shall be continued in service with the top or long leaf broken, or two leaves in its upper half, or three in the entire spring.

A newer design, called the reverse camber type, largely eliminates the weaknes. Due to its shape there is a partial tension stress on the long leaf, which permits it to withstand a much greater shock or strain.

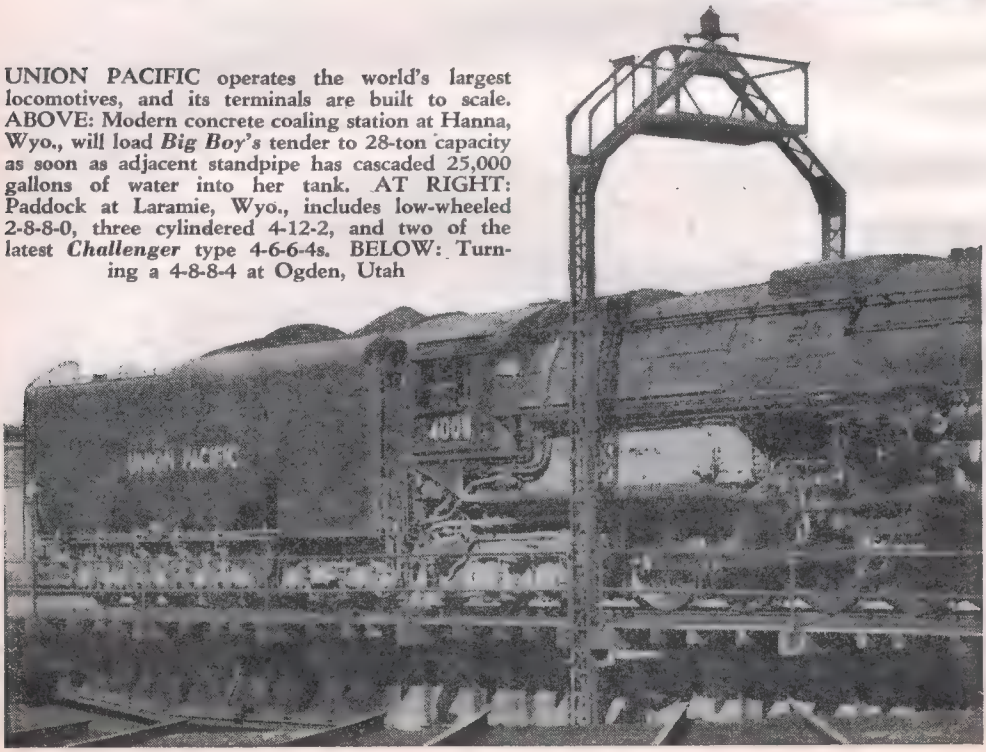
In the matter of spring rigging applications, each designer has his own peculiar mannerism. Some engineers do not set the springs directly on the saddles, but place a roll between the spring band and the saddle. Others have lately adopted the plan of sandwiching a tough fibre pad between the hanger and the spring. By preventing direct contact of solid metal surfaces there is a further dampening of shock and reduction in fractures.

BELOW: Equalizers and springing show clearly as a Baldwin-built C&O Hudson type is lowered onto its driving boxes at Eddystone, Pa.

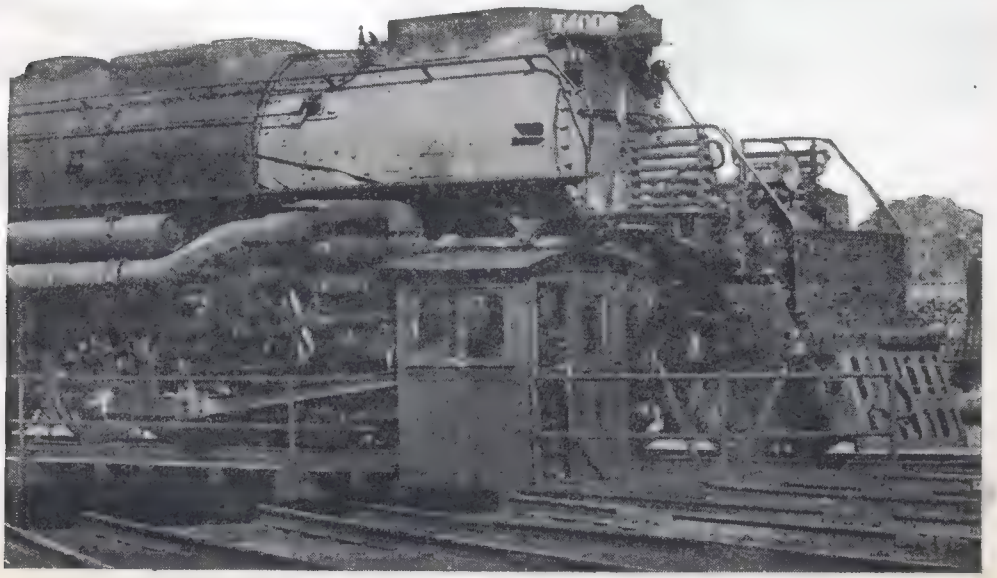




UNION PACIFIC operates the world's largest locomotives, and its terminals are built to scale. ABOVE: Modern concrete coaling station at Hanna, Wyo., will load *Big Boy's* tender to 28-ton capacity as soon as adjacent standpipe has cascaded 25,000 gallons of water into her tank. AT RIGHT: Paddock at Laramie, Wyo., includes low-wheeled 2-8-8-0, three cylindered 4-12-2, and two of the latest *Challenger* type 4-6-6-4s. BELOW: Turning a 4-8-8-4 at Ogden, Utah



Terminals and Titans



Information Booth

1

ARE SPECIFICATIONS *of the PRR's steam turbine engine, featured in your February "Locomotive of the Month", now available?*

Yes; they were released soon after we went to press. Boiler pressure is 310 pounds; driving wheel diameter, 68 inches; weight on drivers, 260,000 pounds; weight of locomotive, 580,000 pounds; grate area, 120 square feet; and tractive effort, 60,500 pounds in forward motion and 65,000 pounds in reverse. (You will recall that independent turbines are used.) The weight of the tender, which carries 18,000 gallons of water and 37½ tons of coal, is 347,000 pounds. All axles are roller-bearing equipped. Total engine wheelbase is 53 feet; that of engine and tender, 107 feet 10½ inches.

2

I UNDERSTAND *that the Canadian National is painting its caboose orange. Why?*

To make for greater visibility, particularly when clearing sidings with long trains. The Canadian National reports that its crews favor the idea. Underframes and roofs are still the standard red, with lettering in white.

3

DESCRIBE *the Caprotti Valve Gear.*

The Caprotti valve gear was invented by two Italians and is of the poppet valve type,

PRE-FABRICATED. Completely assembled slip switch was lowered from work train to New York Central roadway at Harmon, N. Y., recently, with minimum delay to wartime traffic. Locomotive in the foreground is a Lima-built 4-8-2

having two inlet and two exhaust valves per cylinder. Motion is derived from bevel gears mounted on one of the axles and driving a longitudinal, inclined shaft. This in turn motivates two short transverse horizontal shafts which have coarse threads cut on them. By moving or sliding so-called cam shifters on the threads, the position of the actuating cams can be altered angularly. Since these cams, through bell cranks, open and close the steam and exhaust valves, the change in angular position varies the admission, cut-off and release of steam. Some years ago engineers had high hopes for this type of valve in American railway service. But its complexity and undependability quickly led to disillusionment.

4

WHEN *were all-steel freight cars introduced?*

In 1896 the Keystone Bridge Company built two 50-ton capacity steel hopper cars which were exhibited at a convention at Saratoga and afterward placed in service on the Pittsburgh, Bessemer & Lake Erie, now the Bessemer & Lake Erie. This road ordered 1,000 cars the following year, 600 being built of pressed steel and 400 of rolled structural shapes.

5

OLD MAP *I have, dated 1914, shows a railroad with the initials BC&StA, running between Chipley and South Port, Florida. Can you furnish information?*

The Birmingham, Columbus & St. Andrews, was chartered in 1903, under Alabama and Florida laws, to construct a railroad from Chipley, Fla., to Columbus, Ga., 200 miles, with a branch of about 160 miles to Birmingham, Ala. These ambitious plans

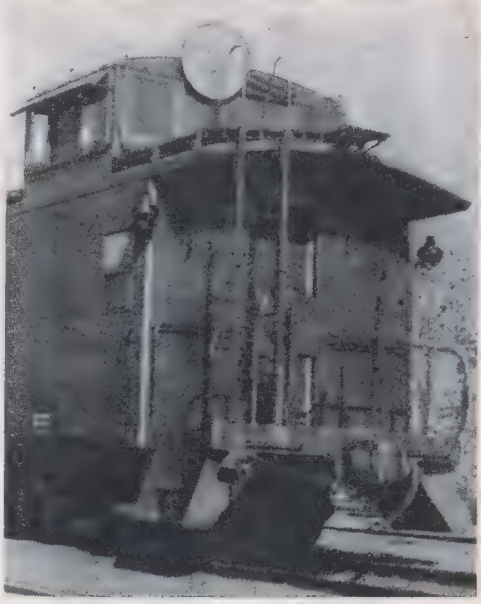
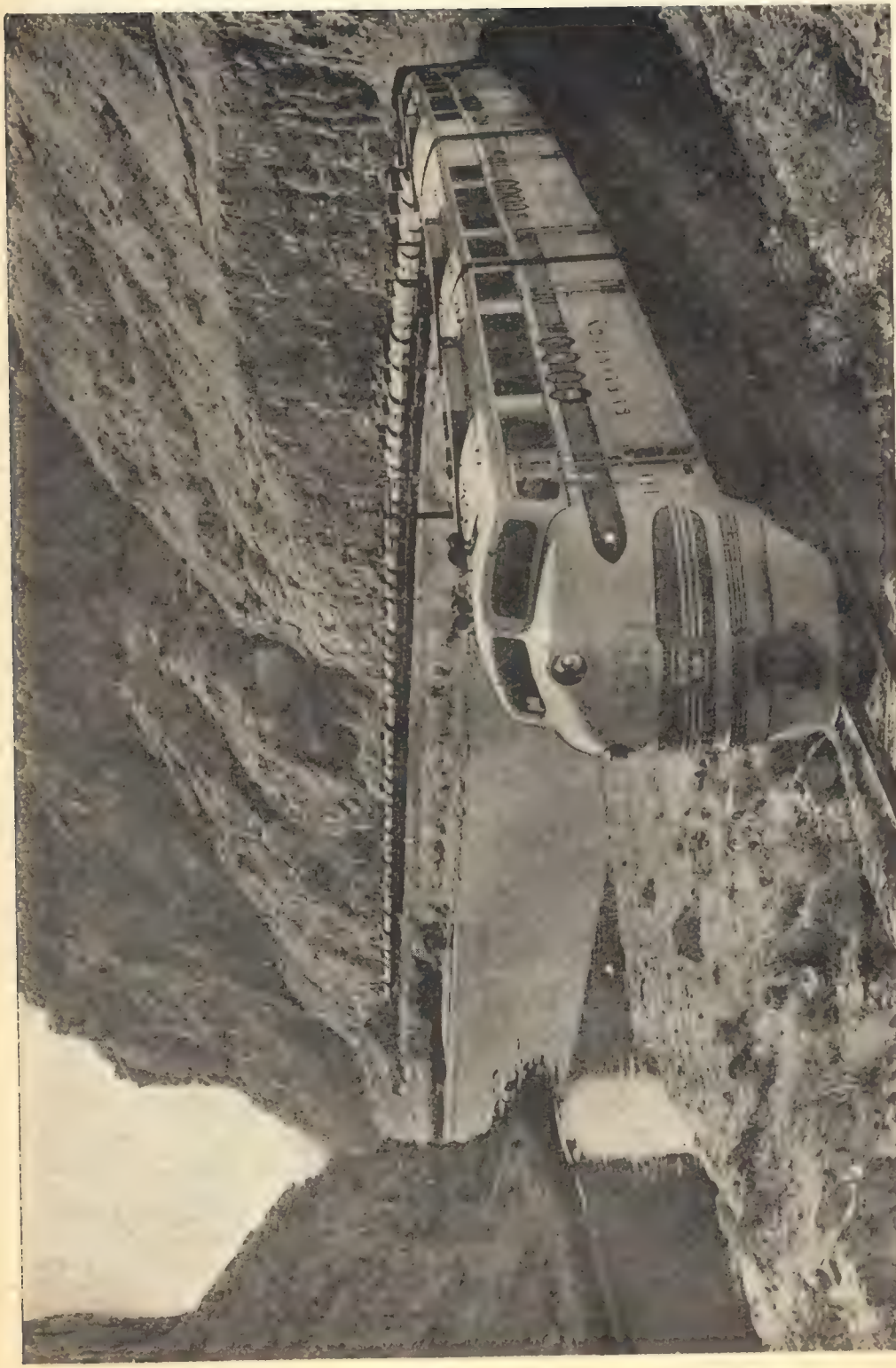


Photo by Jack Flint, 105 S. Wahsatch Ave., Colorado Springs, Colo.

CUPOLA-MOUNTED SIGNAL DISC is used by Santa Fe. Red and white lights indicate *stop* and *proceed*, respectively



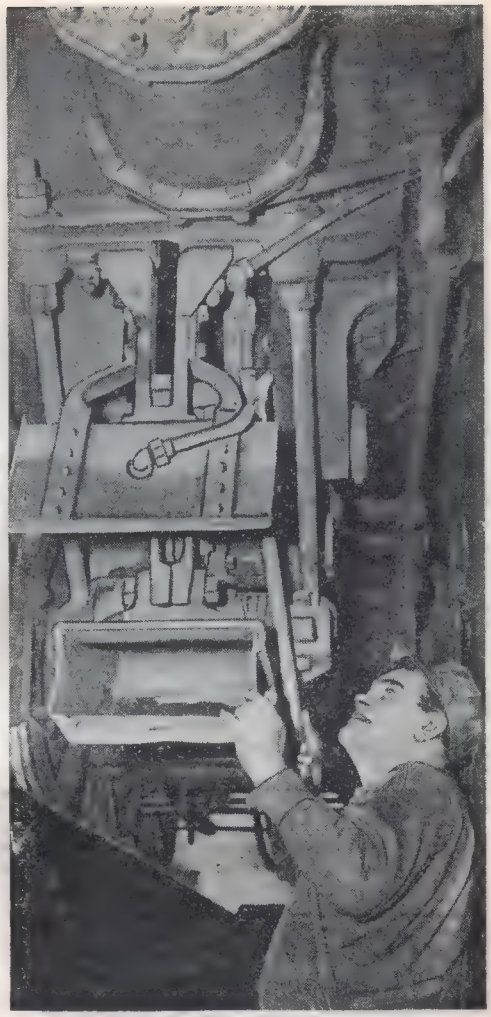
LEFT: Wartime sees strange consists in unfamiliar rail territory. Like some prehistoric serpent this solid tank train, hauled by one of the Burlington's new freight Diesels, threads somber Sheep Canyon, in central Wyoming

never materialized, and the line was extended southward from Chipley, instead, through a virgin forest of yellow pine. By the end of August, 1907, the ten miles between Chipley and Wausaw were in operation, and a little over a year later, train service to South Port was inaugurated, over a thirty-eight mile district. BC&StA owned three locomotives, five passenger and seven freight cars. On Christmas Day, 1908, a long receivership began that lasted until 1925, when the road was reorganized as the Alabama & Western Florida. In October, 1927, permission was sought from the ICC to build a 12.5-mile extension from Chipley to Greenville, Fla., in order to serve a lime-crushing plant and sawmill. Permission was refused, on the ground that if need arose for additional rail facilities in the territory affected, they should be provided by the Louisville & Nashville, through the construction of a branch from Chipley to Greenville, or from Cottondale to Greenville. After hanging on through the depression years, the Alabama & Western Florida Railroad was abandoned and sold for scrap on October 1st, 1939.

6

HOW *did the pooling system of locomotive operation start?*

This method of locomotive handling originated with Colonel Talcott, General Manager of the Richmond & Danville, now part of the Southern, in 1875. The R&D, a five-foot gage line, connected at Greensboro, 189 miles from Richmond, with the standard-gage North Carolina Railroad, which, in turn connected at Charlotte with the five-foot gage Atlanta & Charlotte Air Line. The intervening 93-mile section was, in March, 1875, changed to the same gage to permit continuous-train service from Richmond to Charlotte and Atlanta. The need for such a move had been so imperative that, until additional



INSPECTOR James Rosencrans "okays" a track scoop, at New York Central's East Syracuse, N. Y., enginehouse. In lowered position it can pick up water efficiently at speeds of from thirty to eighty miles per hour, thanks to new design

equipment for the wider gage could be obtained, the run of 282 miles from Richmond to Charlotte was performed by the same locomotives which had previously covered the line from Richmond to Greensboro—crews of the North Carolina Railroad taking charge at Greensboro. Under this system, thirty-six locomotives did the work previously performed by fifty-seven, with their monthly running increased from 1667 to 2683 miles.

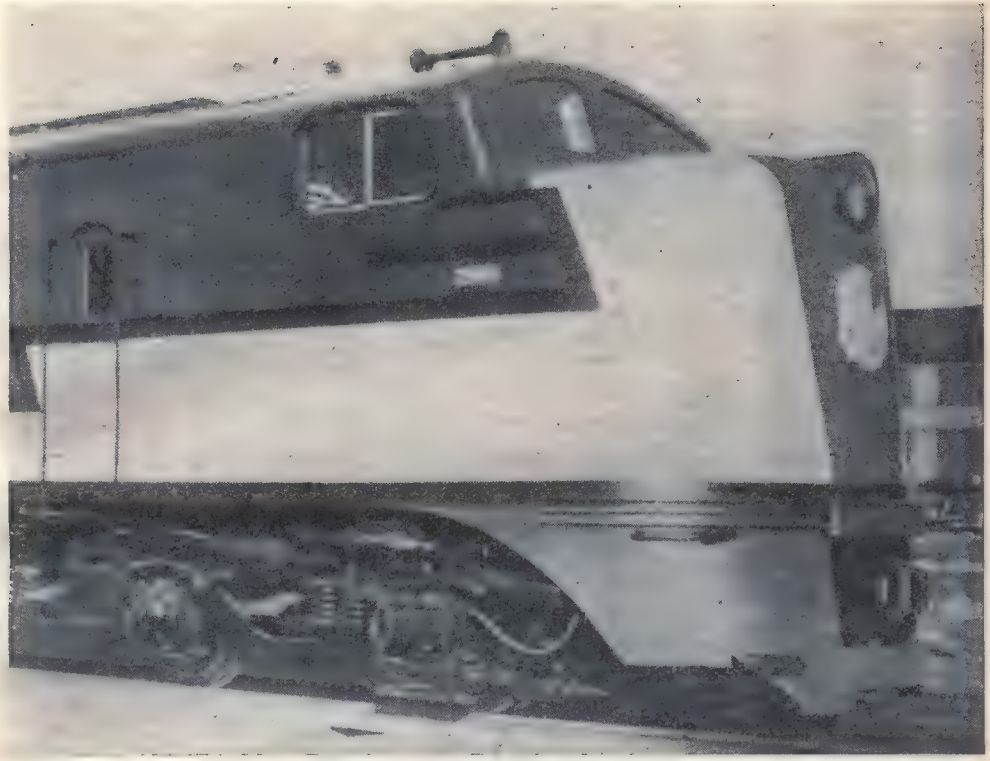
Locomotive of the Month:

AFTER a praiseworthy but unsuccessful attempt to produce something radically new in the line of a road Diesel-electric, Baldwin Locomotive Works, in collaboration with the Westinghouse Electric & Manufacturing Company has just turned out a two-thousand horsepower unit which differs only slightly from engines of comparable power now being manufactured by Electro-Motive Drive and Alco.

The two Diesel engines situated tandem-fashion in the cab are of the conventional one thousand horsepower, eight-cylinder type employed by Baldwin switching and transfer locomotives now in extensive use, and the same may be said of all of the electrical facilities.

More revolutionary, the body is so welded to the underframe and supporting trusses as to form the equivalent of a single piece of rigid steel, which is expected to provide greater resistance to impact and materially reduce vibration.

Although intended primarily for freight hauling the locomotive has sufficient speed for passenger work and operates equally well in either direction. The completion of a twin

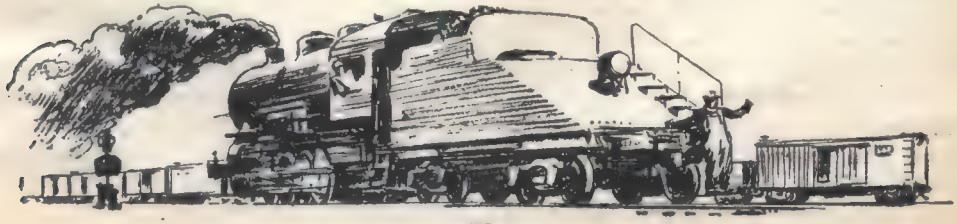


Baldwin Road Diesel

unit, now in process of construction will enable this latter characteristic to be put to use.

At present the Baltimore & Ohio is testing the *2000* between Baltimore, Md., and Washington, D. C.; dispatching it on three round trips daily between these terminals.

Baldwin's invasion of the Diesel road locomotive field has long been expected. Last year only 74 steam units were ordered by our common carriers, as against 596 Diesels. While it is true that by far the greater number of the latter were switch engines, our oldest locomotive builder could hardly ignore a potential-market.



I Was a Pullman Striker

By EDWIN M. PARKER

FROM as far back as I can remember, I had wanted to fire a locomotive. That, to me, was something to live for. Like all the boys in my locality, I found happiness in waving to the lords of the engine cab as their driving-wheels flashed by, occasionally receiving a wave in return. The high spot of early youth came in my twelfth year, shortly after the family had moved to Modesto, Calif., when I got my first ride on a locomotive.

A schoolmate of mine had a brother named Jim Hardin, a Southern Pacific fireman. For a while Jim wielded the scoop on a local way-freight that came through our town at about eleven a. m. I lost no time in becoming acquainted with Jim; and when the engineer let him do the switching around the station I often sat proudly in the fireman's seat and rang the bell. However, I was not permitted to do anything so important as shovel coal into the firebox. As I sat there enviously watching Jim Hardin work with the professional air of an old-timer, I made up my mind that I, too, would become a fireman, although at that stage of the game I had no idea how the job could be attained.

A few years later I left school and began trying various forms of employment, none of them the kind I wanted. I just

didn't know how to go about applying for work as a fireman, nor did I have enough self-confidence to believe I could qualify for so exalted a state.

At length, when I was eighteen, a friend of the family learned about my ambition and offered to see what could be done for me. This friend enjoyed a wide acquaintance in the strata of life known as Railroad Avenue and, indeed, had a son who was a clerk in the office of the Superintendent of Motive Power on the Southern

Pictures on pages 82 and 83 from C. L. Winey

EARLY MOTIVE POWER through the Sierras. Parker knew these engines from the bottom up; first job on Espee was down in pit wiping them clean with waste

Pacific at Sacramento. He got in touch with various brass hats. In due time my father received a letter from William McKenzie, Master Mechanic of the SP at West Oakland, saying:

"Send your boy to the shops here and I will start him on a job of wiping engines."

I was so elated when this news arrived that I seemed to be walking on air. Talk about day-dreams! In fancy I ran away ahead of the humble, greasy, dirty job of engine wiper, even ahead of the rare privilege of working on the left-hand side in the engine cab, and I visualized myself gloriously at the throttle of a hotshot freight blasting my way up the Sierras, with headlight burning a hole through the starry night. Yes, sir, I lived in a world of joyous anticipation.

It was May 31st, 1892, when I reported for duty. That was almost two years before the national strike of the American Railway Union. Going to West Oakland, to the Sixteenth Street station, I soon located the shops and marched into Mr. McKenzie's office. The Master Mechanic eyed me casually, asked a few questions, and hired me as engine-wiper at ten cents per hour, one dollar a day. This job, he assured me, would lead to promotion as fireman if I showed an aptitude for it.

There was no examination. I was turned over to the roundhouse foreman, who told me to show up for work the following morning at seven o'clock. Well, I was so eager to get started that I sat on the steps of the timekeeper's office, with my overalls in a package under my arm, waiting for my time-slip. Eventually the window opened, like the opening of Heaven's gates, and I was given the passport to a railroad career.

Wide-eyed I walked around in the roundhouse, duly impressed with its gloomy magnificence. Soon I found the boss wiper, a grizzled old Irishman named Tom Foley. Mr. Foley was busy rolling up balls of waste in lots weighing roughly two pounds each and handing them to the young fellows, engaged in work similar to what mine would be, who stood around waiting for them. I was slightly disappointed at the total lack of ceremony or initiation. The boss just gave me a ball of waste and said, "Git under that engine there!"

Twenty or more lads were wiping engines. They appeared to be full of fun and liked to play tricks on newcomers. We

worked three in a gang the youngest of the group doing the pit, or all between the frames under the boiler as well as the tender trucks. Each gang cleaned three engines a day, averaging one per man, at a cost of a dollar per engine—which I can say now was rather expensive in contrast with present-day methods. The locomotives coming in warm off their runs were easy to wipe in good weather, and we kept them thoroughly clean.

I HAD worked steadily for nearly a month when one afternoon, as I made a hasty swipe with a handful of waste around the rim of a driving wheel, a steel sliver that had split from a worn tire cut my wrist. I lost a few days over it. Then they gave me a job helping on the turntable, where I didn't need to use my lame hand. Two of us were assigned to the task of turning the table by muscular power. They kept me on this job until I went firing, so it happened that my period as an engine wiper was brief.

On July first, 1892, our company adopted the standard rules; and each candidate for promotion to the job of firing was given a rulebook to study. Later we reported to Oakland Pier for a little examination. We also took a color test. I guess there were a lot of changes in the signals; but as I hadn't as yet worked under them,

PIG-TAILED COAL BRIGADE adds lumps to tender pile. Oriental labor was cheap and hand method of coaling common in 1876. Twenty years later, our author fired from Carlin, Nev., roundhouse, manned chiefly by Chinese

I had nothing to unlearn. The company did not send us out on student trips. Instead, they expected us to ride around on switch engines of an evening and thus learn the signals and gain practical experience.

One day after I had been working in the West Oakland shops just over two months, the caller came to me and said I should go to Mendota that afternoon to fire a yard goat. They had been running the goat without a fireman—a common practice at some outside terminals—but the engineer on the night shift had gotten into a mixup or two, so they had decided to put a fireman on with him. Armed with a pass, I packed my grip and went to Oakland Pier. I left at 5:30 p. m. on Number 17, a new cross-compound engine hauling the train.

Arriving at Mendota five and a half hours later, I found the engineer and the rest of his switching crew in the telegraph office. They were pleased when I broke the news that a fireman had been assigned to them and that I was the said fireman. Things were slack at that moment. As it was supper time, the engineer took me over where he boarded, for a bite to eat.

While he was brewing coffee he interviewed me a little on my knowledge of signals. We had hardly got started on the sandwiches when a switchman barged in to announce that they had rush orders to get a caboose, round up all the armed men we could, and proceed to Collis Junction, (now Kerman), eighteen miles south, where train 17 had just been robbed. We started for the caboose track with the engine. Before we got there, however, the order was countermanded, much to my relief.

That was the night of August third, 1892, when two bandits, Evans and Sontag, held up Number 17, bound for Fresno, and robbed the express car of considerable gold coin. The outlaws fled to the Sierra Nevada Mountains, where posses spent several weeks in chasing them around before the pair were jailed.

Meanwhile, we went to work switching out a train. A switchman came up near the cab and shouted up as we began: "Handle them easy, kid! We've got a cripple here."

I told the engineer; and when I expressed concern as to who might have been hurt, he laughed and replied it was a crippled car, not a man. Evidently I had a lot to learn.

One night we had a little accident. The switchman kicked a car of peaches down the main line toward a train we were working on. Then we went to the caboose track and got out a Western Division caboose ahead of the engine and a San Joaquin Division crummy behind her. Thus equipped, we went down the main stem with the switchmen on the engineer's side. Somehow they didn't notice that car of peaches in time to keep from banging into it hard.

When we hit, my head bumped against the cab-window frame, blackening my left eye. The coal-boards on the tender broke loose and a half-ton of coal piled up in the cab, while a water-barrel in one caboose broke loose and flooded the floor. The brakemen in the hacks, some of whom were dressing, swarmed out like hornets. One of them had a shotgun and threatened to use it if he found a switchman; but the "snakes," as switchmen were called, had taken to the sagebrush and kept out of sight until the trains left.

Al Rerat, the yardmaster, took the situation in hand. Since the cars were not damaged, he coupled up the train.

Of course, all our couplers at that time were of the link and pin variety, but Janney automatic couplers were beginning to make their appearance elsewhere. About half the freight cars from Midwestern roads had no airbrake, only a train-line pipe so they could be cut in a train of airbrakes. Grab-irons on boxcars weren't exactly numerous. Wooden brake-beams outside the car-trucks provided a convenient place for the men to ride when switching.

After I had been working at Mendota for about a month, they put a fireman on with the day-engineer, and we traded shifts monthly. In February, however, the

day-fireman was taken off, as business had become slack. I worked in daytime, as a rule. Eventually I decided I had seen enough of Mendota, having toiled for six months without a day off and owning less money than when I arrived, for it took all my earning of $1.25 a day to pay my expenses.

RETURNING to Oakland, I was sent to Tracy, junction some ninety miles north of Mendota. There I fired another yard goat for five months, and then was promoted to the road extra-list. As luck would have it, the first job I caught was the passenger train between Sacramento and Tracy. This I kept for nearly a month.

Proud, indeed, I felt on the first day, when I looked over at the old switch engine and mentally compared the two jobs. I now made $2.50 a day, but worked only half as many hours as before. I fired an eight-wheel McQueen. As we breezed through the countryside with the little driving wheels spinning to the rhythmic purr of the exhaust I seemed to be sitting on top of the world, for my boyhood dream of being a road fireman at last had come true.

But one day an older fireman displaced me. From then on, things didn't look quite so rosy, especially when I was wrestling with some poor steaming engine on a heavy freight drag, often taking more than sixteen hours on the trip. Once we had a string of sixty empties—a long train those days—and in making a stop, the engine broke away from the tender just as I was climbing into my seat. Only a moment before, I had been cleaning the fire, and my hoe dropped on the ground.

Now I will tell you about one of my trips with Engineer Ed. Cushing. At Los Banos, our first stop for water, I cleaned the fire. Somehow the dump-grate became displaced. Unable to return it into position, I covered the grate with a heavy layer of coal, hoping it would coke over and not drop into the ashpan, so we could get to Tracy that way. But we had gone only a few miles when the grate became bare; and with the cold air coming through, the steam began to fail quickly.

Ed stopped near a pile of ties and had me shake down the fire and hoe the pan. Then, after laying some fence boards and sacks on the grates, he crawled into the firebox and replaced the dump-grate. After that we built a fire with the wood available, and soon we were on our way again. I have often thought of that incident, wondering how many men nowadays would actually squeeze into a hot firebox. This reminds me of the old saying, about bygone days of "wooden cars and iron men."

Early in October, 1893, engine crews from other divisions were sent to Wadsworth, Nevada, on the Humboldt Division, where the SP had a rush of business. The crew dispatcher asked me if I wanted to go over there, too, and fire for Bill, the engineer I had just been with on a work-train. My answer was, "Yes," so they gave me a pass, and the very next day I was on my first tour through the scenic Sierras. Enroute I noticed that the big mountain engines used between Rocklin and Truckee were wood-burners. When I got to Wadsworth that night, I found that Bill had gone out on a trip to learn the road; so I waited there till he returned.

Wadsworth was a desert town. The weather was getting cold and was colder still at Carlin, the other terminal, 256 miles east. At six below zero, I realized with dismay that I wasn't dressed suitably; so I wrapped a grain-sack around by right foot in lieu of an overshoe, for that foot nearly froze from the cold wind that blew in through the gangway. The hostlers and roundhouse laborers were mostly Chinese, some of whom had helped build the road. The freight engines were eight-wheelers, and twenty-five cars constituted a train. Fortunately, we had good hard coal from the Castle Gate, Utah.

On our first trip, we left at night and soon we ran into a hill for which Bill did not make a suitable run, whereupon we stalled and had to "double." At some places it was customary for trains to double, and the brakeman would be prepared to make the cut without our even

POLICE, state militia and United States regular troops enforced order in strike of '94. Brass hats volunteered for such jobs as throwing switches and firing engines. No fences barred Oakland crowds who gathered to hinder rail operation. Portrait: Edwin M. Parker

having to stop. The first time that happened, I did not know we hadn't pulled the entire train over. We finally made the 136 miles to Winnemucca, which was a layover point.

Now I come to an odd incident that happened on one of our trips. I remember it clearly. No doubt Bill did also, but we never mentioned it to each other when we met in later years and became reminiscent. And since we kept the secret while he was alive, I'll not mention his name here. We were called on a Sunday afternoon for an extra east; and set out gaily, not knowing what was to follow.

Well, we got the engine and hooked onto the train, while the one-man yard goat stood at the rear, ready to give us a boost out of town, for after crossing Truckee River bridge the road ran up grade and around a hill.

As Wadsworth was just a small division point, its few inhabitants found but little in the way of diversion; so this Sunday afternoon some railroad employes and friends came over to the train to see us off. Bill got the signal to go, and away we went. The engine seemed to be working as hard as usual up the grade, while I kept busy bailing coal into the firebox, with nothing else in mind but to keep her hot.

Suddenly Bill exclaimed: "Why, I haven't got any air!" And after looking around, he added: "Why, I haven't got any train!"

We were then around the brow of the hill, away from sight of the town. Bill started back slowly, expecting to find the train around the curve; but when we got where we could see the straight track, there we discerned the train still down in the yard—it had not moved a foot! Bill said never a word as we backed down to the train. The engine was popping furiously from the amount of coal I had heaved into the firebox. What a horse-laugh we received from the spectators! Truly, it was most embarrassing. Even today I blush at the recollection.

Well, we got coupled on again and this time we brought the train along with us. I don't recall now how far we had to go to get out of sight of town, but it certainly was not less than half a mile. It was a distance for us to run with the brakes sticking on the engine and deceiving us into believing we were dragging a train. What else Bill was thinking of in the meantime is a question.

WE DIDN'T like the layout over there, and were both anxious to get away. Finally, as Christmas drew near Bill prevailed on Mr. Hunt, Master Mechanic, to let him return to his family, at the same time he put in a word for me, so I went back to Oakland with him.

During the spring of 1894 organizers

of the American Railway Union were active among the railway employes, convincing many of us that what was needed was "one big union" which took in all the railroad workers from the engineers to the trackmen. Such was the object of the A. R. U.

Eugene V. Debs, who had been an official of the Brotherhood of Locomotive Firemen, led this movement. Both the road engineers and conductors held aloof, but the firemen, brakemen, switchmen, car-repairers and trackmen joined in droves. I became a member in June, '94, and still have my membership card. The new union gained strength rapidly. Debs, feeling his organization's power, sought to try it out. First there was a controversy with the Northern Pacific which the A. R. U. won. Then the first thing we employes of the Southern Pacific knew, we were ordered as A. R. U. members to refuse to handle Pullman equipment because the A. R. U. shopmen at Pullman, Illinois, had declared a strike against the Pullman Company.

A. R. U. MEMBERSHIP card. Though several hundred thousand were issued in '94, author's is one of few still known to exist

To help these strikers, President Debs called upon all union members to stage a sympathetic walkout and no Pullmans were to be handled on the Western roads. This notice came late in June '94. The A. R. U. car-repairers immediately refused to work on Pullmans and these men were as promptly fired by the Southern Pacific. Then switchmen in the coach-yard objected to handling trains in which the company deliberately placed Pullmans ahead of mail cars so as to compel the crews to handle them. A notice issued by the United States Government said that any interference with the movement of mail would be severely dealt with.

The situation was thus growing very strained. The company became short-handed and re-hired some of the men they had discharged. The crisis came in a few days; and Debs, backed by the A. R. U. executive committee, ordered a general strike to take effect at eleven p. m. of June 28th. Promptly at that hour the switchmen in the yards doused their lights and walked off the job.

WHITE-COLLAR men served as strike-breakers

Early the next morning I went to the roundhouse to see what was going on. Many strikers were around, opening up blowoff cocks and using other methods of disabling the engines that stood ready to go out on their morning runs. Men coming to work in the shops and yards were turned back and ordered out. A few fights occurred. I heard the shop engineer ask the master mechanic if he should blow the

whistle for the work. The M.M. replied:

"Yes! Go through the motions!"

The result of all this disorder was that no train ran out of Oakland that morning. However, on the local system in town, a few trains were running, with company officials as firemen. These local trains continued to operate somehow for several days. Then on the morning of July fourth the strikers boarded them *en masse* and stopped them. I saw a group of about 150 men flag the Alameda local at a point not a regular stop. Some of them sat on the rails. When the engineer saw what was up, he ran through them like a whirlwind. None of the strikers waited to get hit.

After these trains had been stopped not a wheel turned on the Western Division for eight days. Meantime, brass hats were busy working in the coach-yard with a switch engine. As there was no fence around the railroad property, strike sympathizers did all they could to hinder operations. So much disorder occurred in West Oakland that on July eighth President Grover Cleveland declared martial law there. The Southern Pacific Company backed its ferry boats up to the military Presidio and took on soldiers, who unloaded at West Oakland.

For a few days we were forbidden outside our gates after five p. m. Troops were everywhere. Often the public would jeer at them. An Army officer on horseback rode through a tough crowd and, raising his sword and his voice, bawled to his soldiers:

"If anyone interferes with railroad operations from now on, shoot to kill!"

The strike sympathizers then took the

SHOOT TO KILL was guardsmen's answer to interference with rail operation. Here in Chicago, strike sympathizers traded blows and bullets with troops before officials won out. Lesser disorders occurred in other cities

hint. There were some outlaw acts out along the railroads. For instance, a trestle near Sacramento was sawn in two and a passenger train ditched, killing the engineer, Sam Clark; and the road engineers were fired upon.

COMPLIMENTARY ticket issued during year of rail strike. Government restrictions later outlawed all railroad passes except those issued to employes

THE FIREMEN'S grand lodge ordered the firemen to return to work, but the latter refused and turned their lodge charter to the wall. A few firemen—less than ten percent—stayed on the job. These were mostly men about ready for promotion. They were put to work in running the deserted switch engines. Engineers who had been fired for Rule G and other infractions of rules were re-employed. Strike-breakers with Army passes were entering the yards and taking jobs. A flatcar load of "deputies" armed with pick-handles accompanied the crews switching in the coach-yard.

Strikers gathered in Hansen's Hall, seeking news and encouragement from their leaders, who unfortunately gave out false reports, as the turn of events now seemed to be against them. Reports from other places stated that men were returning to work. A delegate from Sacramento reported that the shopmen there were flocking back. Union leaders at Oakland denied the reports and posted telegrams stating that the A. R. U. was "standing pat" everywhere. The company announced that after a certain date, employes who did not report for work might consider themselves discharged. Our situation was becoming desperate.

Many strikers ran out of funds. Before July had passed, a soup-kitchen was open by the A. R. U. to provide food for needy. The unrest was tense and many men looked elsewhere for employment. I learned later that some of the "scab" firemen who went to work around Oakland were A. R. U. strikers from other railroads.

About the time set for us to return had expired, the company spotted the paycar near the shops and paid the strikers off. We entered the car between two rows of armed soldiers. "Old Mac," the Master Mechanic, stood there and called the attention of other officials to some of his old employes "who had been so foolish as to try and make the Southern Pacific fight the battles of the Pullman Company."

Finally, on August 26th, the strike was called off. The little money remaining in our treasury was voted to defray the expenses of a delegate to a meeting of the Grand union in Chicago, and the A. R. U. folded up not long afterwards.

We were out of a job and times were hard. It was during this depression that Coxey's army marched across the country to Washington, D. C. That bunch of two or three thousands bums even commandeered freight trains in their efforts to reach their goal, where their leader aimed to bring pressure to bear on the government. Failure of the A. R. U. to win the strike was blamed upon the engineers who remained at work and ran the engines with strike-breakers firing them. Years later I came to the conclusion that the B. L. E. had been right in keeping its contract with the railroads and not taking part in the walkout.

Meanwhile, I made an effort to get back to work, but the brass hats were not disposed to be lenient with the strikers. A few were taken back. Others, who found employment with firms where the Southern Pacific had some influence, found themselves out of work again. Obviously the company had some kind of blacklist. This proved to be a fact. Two years later, a lot of us received a letter saying that our names had been removed from the "discharge list."

I did not try to get back right away. It was only when I got a whiff of coal smoke from a passing train that I had a keen desire to be back on an engine. One day I met Mr. McKenzie and asked him for a job. On October second, 1898, I went to work as an extra fireman. When the extra list was cut that winter, I got a job hostling engines at night.

I found the job of hostling engines more to my liking than firing under the prevailing conditions. The work was interesting. Hardly a month passed but something exciting happened. Most of the engines took soft coal from a bunker. The hard coal was shoveled from a pile into buckets each holding a half-ton and then hoisted by air. Sometimes the bunker became empty; and to save shoveling, a few men went aloft to scrape down any coal lodged in the corners.

One night a goodly pile was heaped over one of the chutes and a man stood on the top surveying the results of his labor, when suddenly he began to sink into the quivering pile of coal. He shouted for help, but the others couldn't do anything for him. Soon he became engulfed entirely and disappeared. The crew that were coaling an engine at that chute were horrified to see the body of a man come through with the coal. Our man had fainted, but otherwise was uninjured.

ONE NIGHT the turntable man heaved the twenty sticks of cordwood, used in firing up the engine, into the empty firebox and ran the engine in the house, where the boiler-washers opened the blow-off in preparation of washing the boiler. Some time later he noticed fire falling into the pit from under the boiler. Upon investigating, he found that it came from the wooden lagging that covered the boiler, under the jacket. This caught fire from the heat of the empty boiler when the wood in the firebox had been ignited by a hot clinker. That boiler was well annealed.

Another evening, one of our helpers, who piled cordwood on locomotives and took water for the hostlers, decided to spot an engine at the tank while he was waiting. He took water and went on about his work, but he had left the automatic brake on and the throttle open. Soon the air leaked off and the engine ran away toward the freight yards a quarter-mile away.

We found that she had hit the side of some cars on a crossover, turned the tender over and derailed the engine and two cars, one of which was loaded with boxes of dynamite. The side of this car was torn out, boxes scattered around, but there was no explosion.

In the spring of 1899 I went back to firing, but things seemed so different now. Freight engines were chain-ganged. Strike-breakers were promoted to the right-hand side of the cab. Altogether, I couldn't become reconciled to the situation. Firing a locomotive had lost its appeal to me. Finally, on July first, 1900, I quit firing.

Going to work with the hostler gang again, I was promoted to locomotive inspector. Later I became an outside hostler, delivering relief engines on the suburban system at Oakland. I held that job three years. Then, in 1906, after the San Francisco earthquake had created a lot of work, I went into yard service at West Oakland, running a switch engine for ten hours a day or twelve hours a night, at thirty cents an hour. This position I kept for thirty-two years, finally retiring on a pension November 15th, 1938.

Today I am still living in Oakland, at 185 Fifteenth Street. Memory takes me into the past, to the days when I thought the world's supreme happiness would be to fire a locomotive.

Not on the Order Hoop

By HAZEL B. COLLIER

PERHAPS IT WAS because I was lonely for my husband and son, or perhaps it was the friendly spirit of the road they had worked for before they went off to war, but in 1942 I became an operator on the Southern Pacific. While my "whiskers" are not very long, I was among the first women hired on this division as telegrapher or non-telegraph operators. Knowing the lingo of the rails helped me at the start. Before long I had learned the station business, how to take and repeat orders, and a lot of others things about railroading. But the first day I handed up orders while a heavy train bore down on me, I lost my classroom poise.

A short time after I began working as an op, the company decided to open two new stations, one in each direction from the small town where we had lived before the war. It seemed logical to try to bid in one of these. Far from division points, many regarded them hot versions of Siberia, and stayed clear of them. So at 5 p.m. one Tuesday, the office chief told me I could have one of the posts if I got out there to open up by 8 a. m. Thursday.

The Author

Simple, thought I. Twenty-four whole hours to pack and move things that had taken only years to collect. Then I stopped thinking there, and went to work. I knew there'd never be time to get back for anything we'd forgotten. By Wednesday at four, extra furniture and the grand piano were on their way to a warehouse. Shortly afterwards, a rather ancient Plymouth rolled unsteadily out of town, bulging with clothes, food, canaries, dogs and children as we were off on our hegira to Gila Bend.

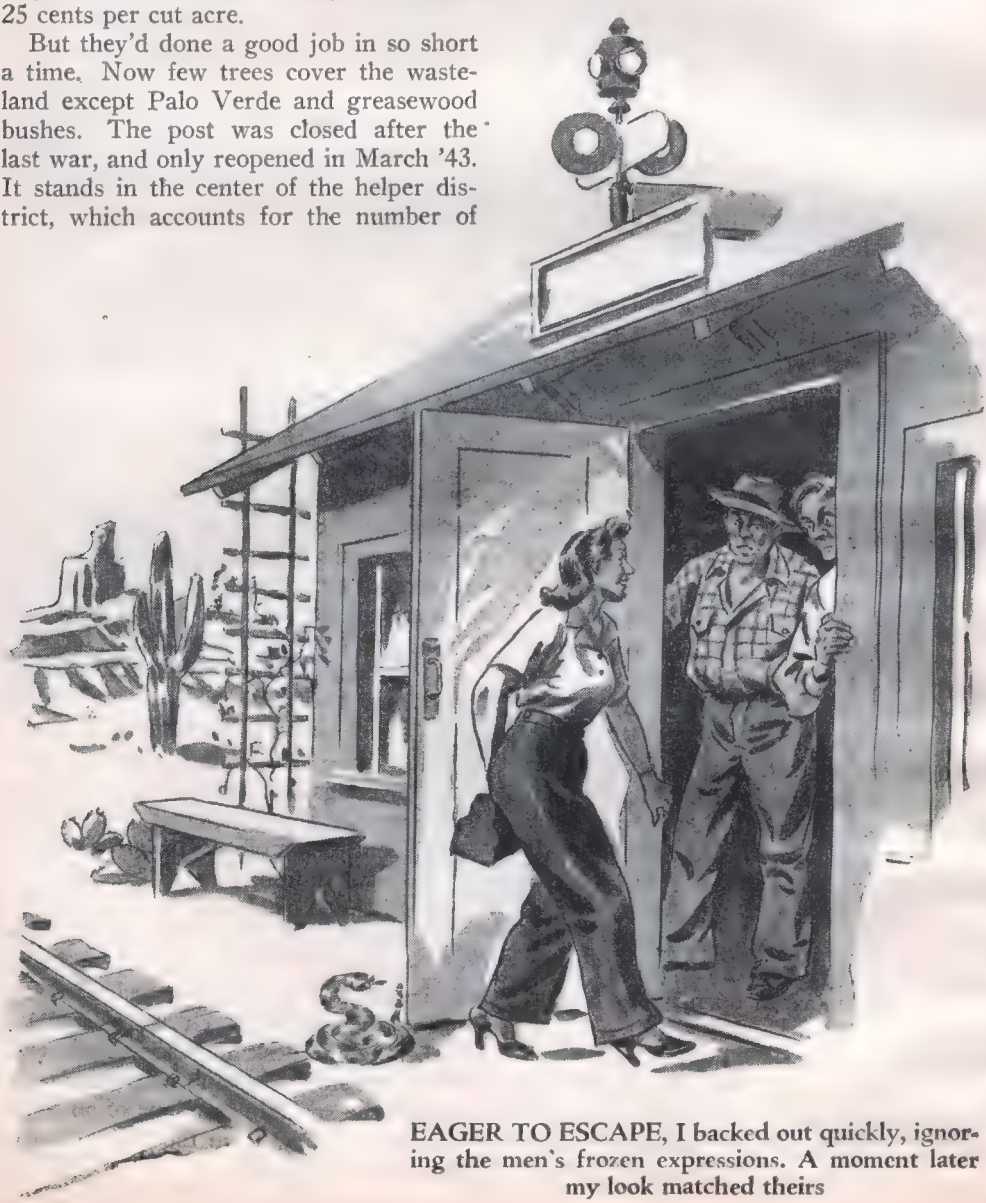
Six hours later, sagging under the weight, our tires rolled into the small town. For the first time I gave serious thought to where we would stay. The town, we discovered, was overflowing with soldiers, their families, Government workers and construction men. Hotels, tourist houses and courts, tents, and parked cars were packed to capacity; they were spread out on the empty lots, too. There didn't seem an inch left for us. Then at last an old friend managed a couple of cots, and to us they seemed like a royal suite.

Next morning, leaving the youngsters to renew acquaintances, the dogs, birds and I drove out to the office. It was a typical war station, remarkable only for its size. There was room for the desk across the front end holding telephone, telegraph key, and signal levers; a window opened at each end of the desk for checking signals; and behind the desk and office chair was the caboose stove. Beyond that, you would measure the space in fractions of an inch. One thing I knew from the start, there'd be no janitor work here.

Bosque itself had been established in 1895 when a forest of ironwood and mesquite trees was so dense that a woodcutter's camp was begun. Later the Espee opened the station to accommodate the wood business. Soon afterward, the Government seized five thousand cords of wood which had been stacked near the station and arrested the cutters. It was Federal land they had been clearing so profitably, and when released they were fined 25 cents per cut acre.

But they'd done a good job in so short a time. Now few trees cover the wasteland except Palo Verde and greasewood bushes. The post was closed after the last war, and only reopened in March '43. It stands in the center of the helper district, which accounts for the number of train orders I relay between dispatcher and trains. Trains must double-head up the hill, and helpers return as extras. In this way I'm kept pretty busy with orders. Yet the time I successfully handed up to a triple-header was one of the greatest thrills I've had here.

This helper district extends for nineteen miles, rising from an elevation of 735 feet to 1530 feet. The track stretches



EAGER TO ESCAPE, I backed out quickly, ignoring the men's frozen expressions. A moment later my look matched theirs

straight as a die for twelve miles; then for seven more it curves and twists through the gap in the mountains. Our office is located about a mile and a half from the first of these curves. On clear days, smoke rising from up or down the valley and round the canyons signals the approach of trains. It's strange to know they follow the path made by Kit Carson and the Mormon battalion as they passed through this arid land to California. Covered wagons followed him later; then in 1856, the Butterfield Company established rest camps on the same route for their pony express; and finally the railroad surveyors of '78 came through the canyon on that trail, turning off only for five miles at the bend in the river to reduce the elevation for coming trains.

FEW EASTERNERS think of the desert being full of animals; fewer know what the railroad means to them. Diners often toss out food, so it's not unusual to see Mexican quail, rabbits and even coyotes trouping along the right-of-way in a hunt for their next meal.

One day at work I tore a hole in my slacks. It happened almost at the time my relief was to arrive, and I had no way of mending it on the spot. However, I decided that a little careful maneuvering would see me through. If it were possible not to turn my back, no one need ever know.

Things went fine for a while. I was on my way out, backing through the doorway, when another problem cropped up. Looking over my shoulder as I chatted glibly, I saw the signal maintainer rolling down the track on his motor. When he came toward me, I kept on talking, giving neither of the men a chance to get in a word. Complimenting myself on my success, I suddenly noticed their expressions freeze. On I went though, moving backward towards the track, my lunch bucket held back of me for further protection. I had practically reached the rails, when I got a view of the whole scene for the first time. Then my facial expression matched theirs.

In my embarrassment I'd broken one of the first rules of the desert—I hadn't looked down before leaving a doorway. There in front of the office lay a rattlesnake, larger than any I'd seen before. He had his head up and seemed to eye the operator inside with a wicked gleam. Both men, I learned, had observed the snake too late to warn me, and were hoping I'd step wide enough to miss him. Fortunately, I did just that.

Since then, I've had several meetings with rattlers, but our friendship hasn't improved with acquaintance. I met one later when he stretched out on the exact spot where I was to hand up my orders. I had to OS a train, but when that was done I grabbed a broom and was on my way. I decided to chase him off to his desert home, but my deductions proved wrong when he headed under the office. It took the rumbling of the next train to dislodge him, but then he came out ready for attack. I fired large pieces of shale at him till a lucky strike broke his back.

The twenty-mile drive to and from work is the most hazardous part of my job. The present tire shortage isn't particularly helpful to desert travel, for the road that follows the tracks is of the unpaved country variety, used only by Espee employes and a few cowboys. Two or three arroyos cross it every mile, and these are treacherous in both wet and dry weather. Heavy rains in the mountains may cause them to flood, running with swiftness of a locomotive, unsafe for crossing for an hour or more; drought makes them equally bad to one unfamiliar with sand driving.

ALL MY LIFE I'd been a pavement driver, but I'm learning fast to drive on sand. Tires have been my chief problem, and for three weeks the local ration board even debated giving me a spare. On the way to work one morning I heard the fatal *swish*, and felt the car begin to weave. I didn't need to see a flattened tire to know I had one.

No spare, four old tires minus one, meant two feet and a long hike ahead.

There isn't a human being along that ten-mile stretch between the terminal and the train-order office. I was on my own and not quite sure where. In the desert, every place looks exactly like some hundred others when you start on a hunt for landmarks.

Crossing over the right-of-way, I found I was a quarter of a mile west of the siding which marks the halfway point on that section, so I was almost right in the middle of nowhere. I headed for the trainmen's phone and called the dispatcher at the terminal to have him send out someone for my car. Then I started off, hoping to find the section foreman and his gang about a mile up the track.

Each step I took made the distance between us seem longer. But when I caught sight of them, my pace quickened as I saw an end to my stroll. Once I reached the section boss, I felt my walking days would be temporarily over. So on I went.

I found him, or rather traces of where he had been. He'd left his gang to go back to the section house. Discouraged, I continued my cross-country walk, my feet getting heavier and heavier. I had to keep moving.

When I heard the sound of something approaching behind me, I didn't even turn around. The desert had begun to grow hot, and I was afraid I had imagined the noise. But as the putt-putt drew closer and relief seemed near, I realized how tired I was. I sat down on the tracks, determined not to walk another step. Luckily, it was the signal maintainer. The men at the office had become worried when I didn't show up, as they were sure I had no water. They were right.

Last June almost ended my career. On my way home one hot night I had another flat. Jacking up the car, I decided to find out if the spare had air before I took off the tire. Up went the trunk lid, but it wouldn't stay. I had to push it up as high as it would go, then forward until it lay against the back window of my Plymouth, to give me two free hands to go to work.

The shaking of the unsteady car on the jack, as I struggled to pull out the tire, combined with a sudden desert whirlwind caught the lid in such a way that it slowly began to fall. I saw it start, but in spite of that I couldn't dodge in time. I felt the sharp crack, and no more.

An eastbound train saw I was having trouble and passed a note to my fellow operator, as they went into the hole for three westbounds that were blocking one another. The first of the three reported the trouble also when they reached the terminal; but the second held up by the blocks when the first entered the yards, stopped with their caboose opposite my car. The conductor sent a brakeman to investigate, for it was five-thirty and he knew I'd been on my way since four. The brakeman found me lying across the road in the hot sun. The spare was out and so was I. Luckily the heavy tire had thrown me clear. I rode home in style in a crummy, but with what a headache.

Life in the office seems that of any operator at a lonely station. I receive and deliver messages and train orders and do some clerical work. Since there's no agency, train orders are the main job, and an easy one now that I'm used to facing clattering wheels. While the desert is scarcely the choicest climate to work in, people here are some of the friendliest I've ever met. I enjoy my regular job, as well as the queer things that break our routine.

Recently, a bum thrown off a train near my station was reported dead. Later he turned up very much alive in my office wanting information about the first eastbound train. He was out for revenge. I tried to act calm as I gave him the facts he wanted. But I made sure my revolver was in plain sight when I told him he'd have to stay outside as the company didn't permit people in the office.

I've been a telegraph operator on the Espee long enough now that the newness has worn off. Still the work itself has the same fascination and feeling of adventure for me, as when I first came. Plenty of life is seen from my shack alongside the rails, and I've no desire to move too far away.

Single-Track Game Trail

By H. W. HUTCHINSON

FIFTEEN YEARS as operator and agent on the Los Angeles and Arizona divisions of the Santa Fe made me wonder where the coolest spot could be. A few sessions with 120 degree temperatures in the shade convinced me that snow-capped mountains and glaciers were my answer. So, on October 31st, 1941, I arrived in Alaska to begin work as agent at Healy. After the first winter of 60 below zero, I knew my search was ended.

Alaska's single-track railroad stretches over 470 miles of bleak hills between Seward and Fairbanks. Not built for wartime traffic, it has to carry enormous tonnage because of its nearness to armed forces in the Aleutians. Manpower shortage often makes it necessary for section crews to work twenty hours a day, while trainmen sometimes are gone a week or ten days on a run because of storms.

In winter, trains are rated in tonnage according to the temperature. One headache we have to contend with is figuring tonnage in sub-zero weather. Then before the train has actually been made up, a chinook or warm wind may start blowing. I've seen a thirty- to forty-degree rise in a half-hour which meant a radical change in weight for the train. Steep drops frequently occur also, with the same expert calculations becoming necessary.

Climate and the antics of the moose and bears are the commonest topics of conversation up here. Plotting the winner of the Ice Classic also contributes to our talk around the fire at night. This event occurs each year; the winner is picked by the ice break-up. First a tripod is frozen into the center of the Tanana River at Nenana. A wire attached to this extends to a tower on shore, and, after various wanderings, ends in a connection with a master clock. When the ice in the river breaks loose in April or May, the mass moves with the current and the tripod starts downstream. This motion breaks the wire, stops the clock and declares the victor.

A pool of $100,000, less expenses, is the prize. Naturally, everyone has a theory on how to win. I knew a hogger who chose his time from the number of his engine on a certain day. He covered that hour and minute, a.m. and p.m., for a three-week period. Then, as several years went by without success, he decided to save his money. He didn't enter the pool, and only through habit noted his engine number. But thrift didn't pay, either. That year the engineer's choice was the lucky number and no one had bet on it.

Bear and moose are quite common in the railroad belt. The bears—black, grizzly and brown—show up usually around the homes near Tunnel; and the brute that seems tame enough to eat out of your hand may be just the one to eat the hand. All three kinds are dangerous when surprised, but the black bear is the

BRUIN deserted his fish dinner

WITHOUT HEED to grim warnings of the whistle, the moose trotted on proudly, while the conductor aimed a lighted fusee at him

least mean. Since 1941, I've worked at Healy, then at Nenana, and for eighteen months as train dispatcher at Anchorage, before returning to Healy as agent. During this time I've kept pretty informed as to what's going on along the line; and if I hear a good story, there's usually a wild beast in it.

SOME time ago George W. Colwell, Chief Engineer, was riding merrily along on his rail motor-car when, without signaling, a bear cut in ahead of him. At the start, only a few hundred yards lay between Bruin and the engineer, and the animal's pace kept this distance steady for several minutes. Colwell was working up enthusiasm for the race. Then suddenly, a leap brought his opponent to a halt on the track in front of the little speeder.

There was no red light ahead, so it looked as though the beast had stretched out for a sleep. Stopping his motor and allowing a healthy amount of time to elapse, Colwell gingerly approached for closer inspection. To his surprise, he found the bear was dead. I have yet to hear a satisfactory explanation of the incident, though some claim the animal may have been frightened or his heart was overtaxed by the unequal contest. Whatever the cause, it was his last run.

Not long ago, I heard about the wife of a section foreman near Tunnel, who was sweeping her kitchen when attracted by a noise outside. Checking up, she discovered a bear gobbling huge pawfuls of her newly pickled fish, set in barrels on the back porch. The brute was surprised, and the wielding of a wicked broom sent him into hasty retreat. Last seen, he was beating a trail through the brush.

As though to prove their native impartiality a grizzly turned up shortly afterward in the home of the foreman on the south end of the line. The king snipe had just returned from a stroll with his dog. Once inside the house, the pup made a quick dive for the kitchen, but dove out even quicker. He didn't stop for some time after the door had slammed shut behind him.

Curiosity sent his owner in to investigate. Soon the master and dog were on the same side of the front door. There they held silent conference as to the next step. Naturally, they knew that the bear inside was disposing of some choice tidbits; but at the moment neither was prepared to challenge his right. Then came a terrific noise from the rear.

They waited, expecting another to follow; but the sound was not repeated. Not even a door slammed. Finally, the two cautiously circled around the house to where they could see, yet not be seen. From the tracks in the yard, they knew their visitor had departed. No doubt their unexpected arrival had startled him, too; but he'd taken to the back entrance—or exit. However, this animal didn't go through the formality of opening doors. He took the back one off with him.

Now we come to the small dog that bit a bear. If you travel to Tunnel you can still see the live specimen of dog. The affair took place near the depot with the owner, Agent Don Schnell, looking on. His pet sighted a bear along the tracks and went after it. He'd go near the beast and yap, then jump back out of its reach. Slowly the bear retreated from the yard, eyeing his foe warily. Then it happened. The monster's hind paws caught on the rails, throwing him on his back with a sharp jerk. The dog jumped on the big furry body, took a quick bite at the round stomach, and was back at his distance before his opponent could let go with a one-two rip and tear. Bruin lumbered off.

MILES OF ICE and snow lie in every direction on this northern arm of the continent, but the moose seems drawn to the railroad. One tale is often repeated in sandhouse sessions. It happened one morning when the snow had drifted higher than usual. A rotary plow had cut a canyon of snow along the rails, with walls so steep it was impossible for man or beast to leave the trail. There were few breaks in the embankments between the terminals of the road. Somehow, a bull moose found this trail and decided to follow it.

He was heading north from Curry when he met the southbound freight. The engine whistle caused him to whirl around and trot back in the direction from which he had come. But the huge quadruped was in no hurry. Time was no object, so several miles slipped leisurely by while he went loping along, slowing the train to his own pace. The engineer became impatient. His whistle took on a grim note of warning. The train crept closer, still closer.

Then the conductor lit a fusee and, applying it to the rear flank of the unsuspecting creature, forced him to leave the track. The solidity of the snow-wall bowed to the superior force of the moose with his steam up. On went the freight, leaving behind an unhappy moose.

Tragedy dogged this misguided animal. He was met at the nearest station by an armed section foreman, dispatched to put an end to his adventures along the iron trail. One well-aimed bullet and the moose was dead, leaving behind only the record of having tied up the line for several hours. Permission for this violence had been obtained from the Game Commission at Anchorage, as it was a closed season.

I also knew of a crew who shot a moose and tossed the carcass into a boxcar. They saw visions of steaks, roasts and even mooseburgers, and I assure you this meat is rated with the best wild game. At the end of their run, they headed back to recover the prize. Opening the door, they found it—the skeleton of its former self.

They'd overlooked just one small fact when they placed the meat in that car for safety. Housed with it was a dog-sled team. The carcass had now all but disappeared, but it was not hard to guess where. One look at the satiated dogs told the story. It's said that the Northern light had a blue shadow that night.

"Delayed 20 minutes removing dead bear from pony trucks" and "40-minute holdup on trestle, moose ahead" are not uncommon on train sheets of Alaska. Trainmen and crews are performing wonders to keep the wartime loads moving regularly in spite of the difficulties. Come peace, you may hear awe-inspiring tales of the hardships and problems met and overcome. But from the men along the line, you're bound to hear a good yarn that often grows better in the retelling, if perhaps harder to believe.

Electric Lines

WHAT IS AN INTERURBAN?

DESPITE all references to streetcars, interurbans and electrified steam roads which have appeared in this department for more than two years, we believe that there are still a lot of readers who confuse these terms, especially when they try to put the interurban lines into one or the other class.

One enthusiast sends a list of all of the trolley and interurban lines which appear in the *Official Guide,* remarking that we should confine our department only to these systems, others being merely streetcars. Another objects to "Streetcar-toons" showing heavy Pacific Electric cars, and calling them "streetcars"—a very general term which hardly indicates the type of service they give.

Over the past years there have been many attempts to define an interurban in terms that would really cover a particular type of transportation which is not a streetcar nor an electrified steam road; yet has some of the characteristics of each. Most of us think we have a good idea of what an interurban line is, but just try to define it in a few words!

Back in 1931 the Piedmont & Northern, down in the Carolinas, sought to connect its two routes, but the Interstate Commerce Commission objected, and the resultant litigation carried into the U. S. Supreme Court, which was obliged to determine if the P&N was an interurban, or not.

P&N claimed they were, because their cars used certain city streets, had more frequent stops than steam lines, and gave more local freight than the average steam line. But the Supreme Court disagreed, maintaining that the road had ceased to be *primarily* an interurban, as their whole operations were based on standard railroad practice and the construction of their track and equipment was

NOBODY has ever given an ironclad definition of an interurban line. It may be anything from a glorified street railway to a multi-tracked rail network of awesome proportions, like Pacific Electric, whose Macy shops appear at left

Conducted by
STEPHEN D. MAGUIRE

in conformity with steam lines.

If the Supreme Court could arrive at any such decision on these grounds, certainly we can expect a variety of opinions among electric railroaders. Between streetcars and interurbans we also find a very indefinite line of demarcation. Frequently local lines extended into the suburbs for several miles, and service was given over routes that looked similar to those of interurbans. But most carried their local characteristics and city-type cars into outlying towns; hence they differed from the real interurbans which were almost half-way into the realm of steam-road operations.

"Well, go ahead and define an interurban line," do we hear you say? Well, we'll try.

An interurban is a railroad operated by electricity which extends from one urban community to another. It generally passes along the streets of the towns it reaches, but outside of their limits it uses a private right-of-way operating at high speed, but making stops at road crossings and stations. Cars are heavier than those used in city service and usually operate in single units. Fares, wages and costs are generally lower than that of standard steam lines.

Usually we find that the interurban grew out of a local streetcar line which, in the normal process of growth, was extended from one city to another. This feature will distinguish an interurban from an electrified steam road, for most of the latter systems were formed years before local streetcar lines started running.

In many cases exceptions to one or more of the general qualifications occur. But by comparing any particular electric line with another which is definitely in the interurban class, it will be found easier to classify it.

OVER the past few years, interurban lines, particularly, have fallen prey to highway competition. All too many exist in memory only, while some of those more fortunately situated have transferred passenger service to buses and are carrying on with freight alone.

Photo by John Riley, Bloomfield, N. J.

OLDEST CAR operating on Monongahela-West Penn interurban line to Weston, W. Va., is the 250

TWO-CAR TRAIN on the Waterloo, Cedar Falls & Northern angles through streets of the first-named city. This Iowa line was originally a steam road. Rear car has observation platform

Leaving such ultra-modern rapid transit lines as the Rochester Transit and the Cleveland Interurban aside, we can count only forty-three companies in the United States, and nine in Canada, which still offer interurban passenger service. In case you are interested in their travel possibilities, here's a list of them:

California has the Key System in the Bay area, and the Pacific Electric in Los Angeles and vicinity. Colorado claims two Denver & Intermountain routes. Oregon has two fine Portland Electric Power lines extending east from that city. Utah's four connecting lines: the Salt Lake & Utah; the Bamberger; the Utah-Idaho Central; and the SLG&W, are famous. (The latter has suspended passenger service for the duration only.) Montana has a stem serving the Anaconda Copper pits near Butte, which is hardly long enough to qualify as a real interurban.

Coming east from the Rockies into the plains, we find Iowa full of interesting lines. The Cedar Rapids & Iowa City; the Waterloo, Cedar Falls & Northern; the Charles City Western; the Des Moines & Central Iowa; the Ft. Dodge, Des Moines & Southern—every one of these a real interurban.

Kansas provides the Union Electric, now operating rather light-weight cars. Oklahoma claims the Pittsburgh County Railway, at McAlester; the Sand Springs Railway, at Tulsa; and the Oklahoma Railway, with three routes out of the capital city. To the south, in Texas, is the Texas Electric and a short line, the Houston North Shore, running from Houston to Goose Creek.

Moving on across the Mississippi, Illinois is the home state for the five-hundred-mile Illinois Terminal Railroad. In the Chicago section are the Chicago, North Shore & Milwaukee; the Chicago, South Shore & South Bend; and the Chicago, Aurora & Elgin. Wisconsin's interurban routes are on the Milwaukee Electric—three lines going out of the Cream City.

Indiana, once the home of many lines, can hardly claim more than the South Shore out of Chicago. Ohio likewise, once netted with interurbans, now has as sole survivor, the Youngstown & Suburban.

Southeastern states boast only the Piedmont & Northern in North and South Carolina, and the two short Georgia Power Co. runs out of Atlanta. Moving northward, West Virginia gives us the Tri-City Traction at Bluefield, and two Monongahela West Penn divisions at Clarksburg and at Parkersburg.

On the east coast is Maryland's Baltimore & Annapolis, while in the center of the same state is the Hagerstown & Frederick. Across the state line in Pennsylvania are several interurbans. Two routes extend south from Pittsburgh. West Penn Railways has ten runs in the vicinity of Connellsville. Conestoga Transportation offers one from Lancaster to Ephrata, and the Lackawanna & Wyoming Valley operates a third-rail-powered line from Scranton to Wilkes-Barre. Philadelphia and vicinity have three interurbans: the Lehigh Valley Transit, the Philadelphia & Western and the Philadelphia Suburban.

HIGHEST INTERURBAN RUN in North America? One-spot of the Cripple Creek District Railway, operated by Colorado Springs & Cripple Creek District steam road, climbed to more than ten-thousand-foot elevation, in its Rocky Mountain ramble between Cripple Creek and Victor, Colo.

New Jersey claims the Atlantic City & Shore; New York State only the Jamestown, Westfield & Northwestern. Vermont has the Springfield Terminal; and Maine, the Aroostook Valley Railroad.

Canada's nine remaining interurban companies are the Cape Breton Tramways, in Nova Scotia; the Quebec Railway Light & Power, the Hull Electric and the Montreal & Southern Counties, in the Province of Quebec. Ontario has four lines: the Niagara, St. Catherines & Toronto; the London & Port Stanley; the Grand River Railway; and the Lake Erie & Northern.

The only interurban at the other end of the Dominion, today, is the British Columbia Electric, with its beautiful scenic run from Vancouver to Chilliwack.

Perhaps some of you will disagree with our list. Others may believe we have omitted important interurbans. But at least they are all electric lines. And be they streetcars, interurbans or electrified steam roads, they are entitled to their due share of space in this department. If you think we are overlooking any, or not giving one its fair share of space, we'll be glad to have you write in and tell us so.

NOW ABANDONED Northampton Transit had attractive station in Park, just north of Easton, Pa., on interurban route to Portland, Pa. Note freight spur just to right of depot

Car-Barn Comment

Steve Maguire

DIRECTLY in line with Lieutenant Commander Quinby's *Post War Challenge,* comes news of more large-scale purchases of rail lines by combined groups of gas-rubber and bus interests.

Corporal Chas. J. Murphy sends us a clipping from the *Baltimore Sun,* which is self-explanatory:

"American City lines, the Chicago holding company which recently acquired an interest in the Baltimore Transit Co., announced that it has purchased the Los Angeles Ry. Corp. . . . This is the third major city in which the Chicago interests have acquired large transit company holdings, the others being St. Louis and Baltimore. . . . National City Lines, the top holding company, owns about forty-five percent of the stock of the St. Louis Public Service Co., with assets of approximately $60,500,000. . . .

"In a statement filed . . . National City Lines said it owned seventy-five percent of the common stock of American City Lines . . . the remaining twenty-five percent of the common stock . . . held by General Motors Corp., General American Aerocoach, Phillips Petroleum and Firestone Tire & Rubber Co. These four companies also owned all of the 9,375 non-voting preferred shares of American City Lines then outstanding and had agreed to take additional amounts of preferred stock."

In its past years of operation, National City Lines has acquired a number of smaller streetcar lines and immediately proceeded to motorize them. But those listed above are the first real big-time outfits into which it has bought an interest.

What interest can such groups have in buying up large streetcar lines, other than that shown in their past scrapping of all rail lines. Imagine being a trolley builder, or even an independent bus-builder and trying to sell your wares to a corporation with such an involved ownership.

Perhaps, when Attorney-General Biddle has finished bringing suits against our railroad companies, he may find time to investigate the workings of these holding companies.

* * *

INTERURBAN history was made in July 1930, when the Cincinnati & Lake Erie Ry. staged a race between one of their new high-speed cars and an aeroplane over a stretch

SUBJECT FOR DEBATE: Was the London & Pt. Stanley line an interurban or not? Originally a steam road, it was electrified as part of Ontario hydro-electric scheme; actually drove a competing trolley system out of business

THIS INTERURBAN made history. Car 126 of the Cincinnati & Lake Erie raced plane near Dayton, O., back in 1930

of straight and level track near Dayton, Ohio, as part of publicity campaign to demonstrate the capabilities of these cars.

Pathe News, foremost newsreel producer of the time, was on hand and took movies of the contest, which were shown in theatres all over the United States. Reports indicate that the car which made the record run was number 126, now Lehigh Valley Transit 1002, and the top speed was "over 90 miles per hour."

Perhaps some reader can give more definite information as to the maximum pace of the car on this run, which we believe set an all-time record for interurban running anywhere in the world.

"RECENT strike of the North Shore and the CA&E employes has taught some of the people around here the value of their interurban service," writes Tom Lesh, 1104 S. Second Ave., Maywood, Ill.

"The experience of riding substitute forms of transportation has shown that even the steam lines could not provide adequate commuting service because trains are too infrequent (sometimes three hours apart), and they don't make convenient stops.

"And as for buses, just show any of us a bus that can handle the heavy rush-hour and service camp travel around Chicago!"

* * *

RESUMPTION of rail service on the "M" streetcar route in San Francisco took place on December 18th last. It was not too long ago that one of our readers expressed hope that this line would resume operation.

Cars now run every ten minutes during rush hours and every fifteen minutes in off hours, serving the newly opened Parkmerced housing project which is expected to house five thousand persons when completed this year.

* * *

OUR VOTE for the "Strike of the Year" goes to the passengers who used this weapon on a Chicago Elevated train, last November 10th.

Our information comes from Joseph P. Abbott, 266 East Chicago St., Elgin, Ill. He tells us that the occurrence took place on a Douglas Park train at 56th Ave. station, in Cicero. At this stop the rear car of the train was scheduled to be cut off, and the fifteen passengers were asked by the trainman, to move to equipment ahead.

Seeing that all the other cars were crowded—some passengers were standing—the rear-car riders quickly united as a body and refused to budge. To trainmen they said: "We've got as much right to strike as you have and that's what we are doing." (Obviously they referred to the CNS&M and CA&E strikes.) After a few minutes' delay, victory was achieved by the hastily formed passengers' union and the unbroken train proceeded to the end of its run.

War nerves, we call it.

* * *

POSTWAR plan of Kansas City P.S. is to convert ten streetcar lines to gas and trolley buses, advises A. E. Hickerson, 2304 E. 15th St., Kansas City, 1, Mo. In addition, it is expected that all lines on the Kansas side of the river will be changed to bus operation, as the politicians of Kansas City, Kans., have just placed a prohibitive tax on streetcars in their city.

On the other side of the ledger, KCPS is planning to put PCC cars on at least five lines, as soon as they can be secured: Troost, Country Club, Swope Park, 12th St., and 31st St. lines.

Clayton Moseley, 816 S. Boeke, Kansas City, Kans., tells us that KCPS expects delivery in 1945, of seventy of their order for two hundred PCC cars, which will raise their total number of streamliners to almost 100 cars.

* * *

"STREETCARTOONS for December, 1944, carried a drawing of a telephone pole used as a buffer at the end of San Diego trolley line," writes Lieutenant S. J. Crumpacker, Muroc AAF, Muroc, Calif. "Well, you may be interested in knowing that the telephone pole was not too satisfactory for that use. On December 9th a streetcar went sailing into it, breaking it in half.

"I don't know what damage the trolley suffered, but if it's at all like the one I rode on recently, it probably collapsed of old age."

* * *

YOUNG juicefans now have a club, the *Junior Trolley Fans of America,* which is open to all fans between the ages of ten and eighteen years. Herbert C. Woods, 717 West Green St., Palestine, Texas, tells us that in the two years that the club has been operating, many new members have joined, and a magazine, *The Spark,* is issued free to members. Further information can be obtained from Mr. Woods at the address above.

* * *

NEW YEAR'S EVE was celebrated by two juicefans stationed at Perrin Field, Texas, in a most fitting manner. Starting out on the Texas Electric at Denison, Tex., Lt. Barton Davis and Pvt. John Koella, rode the entire TE line and also the local lines in Dallas and Waco, returning to Denison at 10 a. m. New Year's morning, after having spent the last twenty-four hours riding four hundred and seven miles of juice track.

"We traveled on all representative classes of cars of the Texas Electric," writes Lt. Davis, "including an express motor and third-class freight, visited three TE car barns, shops at Monroe and three Dallas car barns. Now we're planning on a trip to Oklahoma Railways."

New Railbooks

SUPPLEMENTING *Trains'* four previous albums of railroad photographs *(Eastern Railroads. Far Western Railroads, Mid-Western Railroads,* and *Colorado Railroads),* are five newcomers, devoted to subjects of equally popular railfan appeal. The first of the new series, Number 5, deals with *Southern Railroads;* Number 6 covers *New England* Railroads; Number 7, *Electric Railways;* Number 8, the *Pennsylvania Railroad;* and Number 9, the *New York Central Railroad.*

Each album measures 10¼ by 14 inches and contains approximately twenty glossy coated pages, loop-bound for convenient inspection of the excellent halftone reproductions and caption material printed thereon. While locomotives and rolling stock form the bulk of the subject matter, scenics and railway structures, too, have been included in the illustrations, of which there are an average of three to the page. These albums which are available through the Kalmbach Publishing Co., 1027 N. Seventh St., Milwaukee 3, Wis., sell at $1 apiece.

* * *

EVER HEAR of a tinplate engine designed to blow a puff of cigaret smoke out of its stack with every turn of the drivers? Probably not, unless you've read *Riding the Tinplate Rails,* by Louis Hertz, outstanding authority on America's second largest hobby. Yes, the old Ives Company built such a model in a happier day, when cigarets were plentiful. They went even further and placed a cap in another loose-jointed locomotive, which detonated when the pilot struck a wall or chair, hurling boiler and cab knee-high in a reasonable facimile of a then commonplace boiler explosion.

All in all, tinplate production throughout the years seems to have shown more faithfulness to period then to prototype. Consider the just retribution heaped upon foreign manufacturer Bing, who shamelessly offered the youth of America a refrigerator car bearing the familiar slogan *Schlitz. The Beer That Made Milwaukee Famous.* Came prohibition and the word *Beer* had to be deleted for, to quote from the amendment "It shall be unlawful to advertise anywhere or by any means or method, liquor—"

More recently, German makers of toy trains gave the world a hint of things to come when they produced military railway equipment of lilliputian proportions, complete to hospital trains. It was interesting to note that all of the figures of wounded men supplied with each car were dressed in French uniforms!

Riding the Tinplate Rails, 279 pages, cloth-bound and copiously illustrated, may be purchased through the Model Craftsman Publishing Corp., of Ramsey, New Jersey. It sells at $3.50.

* * *

HIGH SPOTS of *Bulletin 65* of the Railway & Locomotive Historical Society are a biography of Andrew Jackson Stevens, by D. L. Joslyn; History of the Denver, Boulder & Western Railroad, by N. C. Poor; and an explanation (insofar as it is possible to make one) of the locomotive numbering system of the Pennsylvania Railroad, by Charles E. Fisher, President of the Society, and author of *Inspection Engines,* appearing elsewhere in this issue.

Joslyn's word portrait of Andrew Jackson Stevens, the Vermonter named for a Southerner, who found fame in California, would be of special interest to all students of motive power. Designer of the valve motion which bore his name; builder of *El Gobenador,* world's largest engine in its day; guiding force behind the inauguration of Southern Pacific carferry service and sponsor of fuel oil, first for these boats and later, the locomotives of the system, Stevens was an executive of the highest type, respected for his understanding of and consideration for the men who worked for him.

Other features of the *Bulletin* which sells to non-members of the Society at $2 and is available through R&LHS, Baker Library, Harvard Business School, Boston, Mass., are items from the records of the Galena & Chicago Union Railroad, sketches of early C&O history, and that of the Carrollton Railroad, and a short on railroad landmarks of New York City.

The Showdown

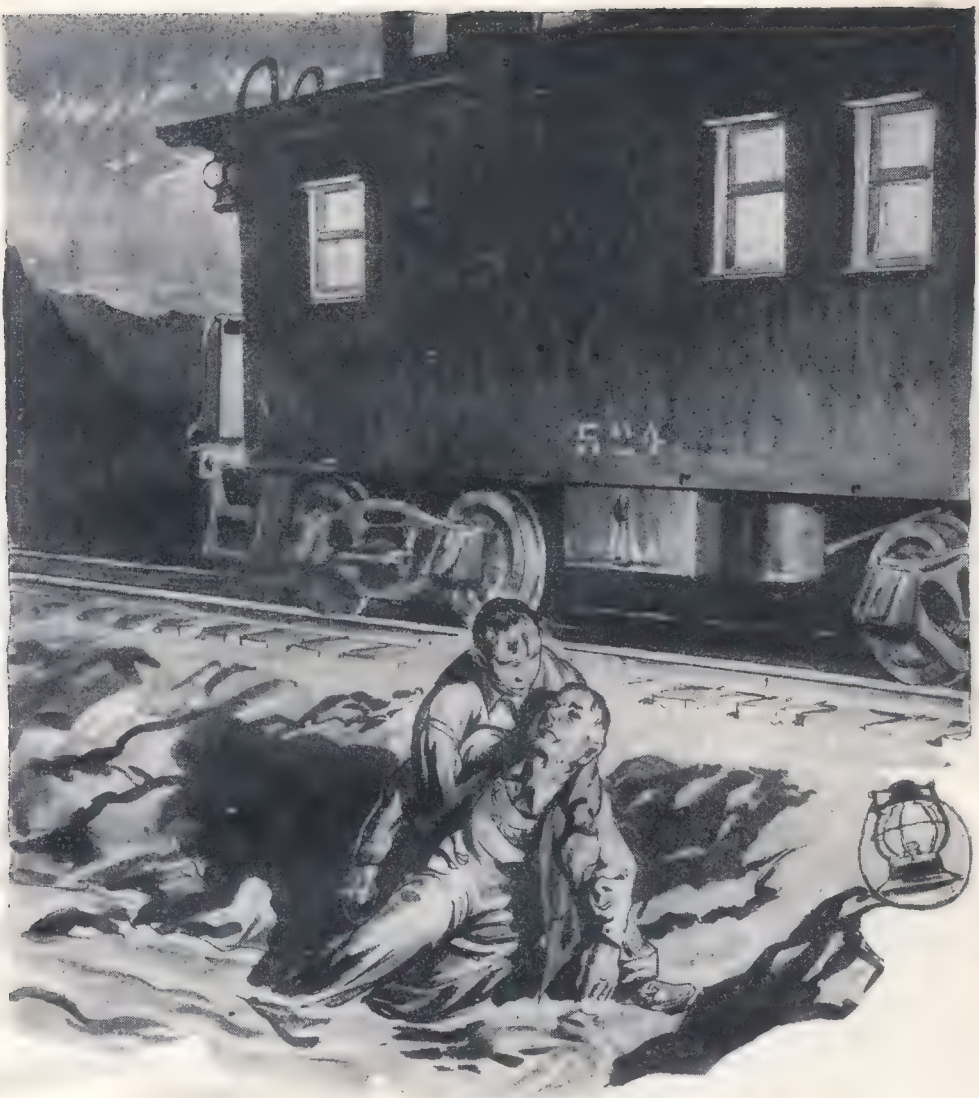
Deserton Was Betting That Connolley Would Tie a Can to a Certain Branch-Line Skipper

By E. S. DELLINGER

Ex-trainman, Missouri Pacific and Frisco

THE showdown was near. Brakeman Connie Matthews felt certain of it that morning when he came in off the desert local and saw a message informing the Deserton office that three "mains" were rolling in from the west some time during the night. Mains brought trainmasters; those officials pried the lid off carefully-guarded secrets. Connie didn't need a crystal gazer to tell him that when Trainmaster Pat Connolley arrived at Deserton and found one of his conductors going to work with a hide full of liquor, that conductor's days were numbered.

Not even in Bill Riley's case could there be an exception, though Riley's name had stood for thirty years on company records without blemish. Friends overlooked his delinquency on grounds of the mental upheaval



"THAT MAIN," Riley gasped. "You've got to flag it!"

which followed his receipt of three we-regret-to-inform-you telegrams from the War Department dated less than a week apart. The mute appeal of three gold stars in the service flag that hung on the wall of Bill's way-car was explanation enough for them.

But in the official code of the rail there is no such excuse. The man who slips pays with his job and his seniority. If Pat Connolley should see Riley stagger into the yard office to take out a train, Riley would go; and so would the friends who had been "covering up" for him.

This prospect was of real concern to Connie Matthews, for Connie had married the conductor's only daughter. The three young fellows killed in action overseas had been his broth-

ers-in-law. Connie was thinking hard as he made his way that morning to Mrs. O'Hara's rooming-house, a frame structure partly shaded by tamarack and alamo. His mind was still troubled when he went to bed.

At nine o'clock the thermometer registered 112, and didn't fall one degree as the sun strode across the coppery sky and skidded toward the jagged black peaks which form the desert's western rim. In Connie's room, the air sucked in by a fan through dripping excelsior was hot and sticky. This device had been contrived to lower the temperature, but the steady drone of the fan racked the sleeper's nerves. Now he scarcely noticed the noise; his mind was troubled by thoughts about his father-in-law and the quart bottle in Riley's locker.

Thus morning and afternoon passed. Six o'clock came, and footsteps sounded on the cinder walk outside. Up the front steps they came briskly, then the screen door squeaked. Silently, Connie's bedroom door opened and Jimmie Gleason stood peering into the darkened chamber.

Jimmie was a bantam with milk-white hair, one good eye and a glass one. In the booming twenties he had handled hot news wires of the Associated Press in the East. Where he had spent the depressing thirties was his own business. He'd come into Deserton with the wartime rush; and he was now issuing train orders and calling crews for the one regular eastbound freight and westbound passenger that came through Deserton between four p.m. and midnight.

Connie sat up in bed and raised the blind. His visitor closed the door.

"I'm calling you for the 7:25," Gleason said, his voice pitched low so as not to carry into the adjoining room. "If I was you I'd get out to the office as soon as possible. From the way things look now, you're likely to be conductor and three brakemen on the local freight."

CONNIE didn't ask what he meant. When Bill Riley had gone haywire right after getting the gloomy news, his two steady brakemen had left the desert branch to avoid an inevitable showdown. The trainmaster had promptly sent down two Rule G boomers to fill the vacancy. Riley and these two were probably drunk by now, unfit to make up or run the train. If they were it would be up to him to handle the necessary brainwork. Immediately he wanted to know when local connections were due in from the west.

"In twenty minutes," the operator said. "I'm giving you an early call so you can get your train made up and have that guy out of town before the trainmaster shows up."

"What time do you expect him?" Connie queried.

"The first main is due in at 10:30. He'll probably come pussyfooting in on that."

Dressing hurriedly, Connie set out for the yards with Jim. Even in wartime Deserton was no rushing terminal. It lay in the heart of southwestern desert, midway between two main stem connections nearly four hundred miles apart. Except for the mains moving between training centers, traffic consisted of one regular freight and one passenger train a day in each direction.

A low yellow station house and telegraph office sprawled out along the tracks. It owned no switch engine, nor roundhouse. Dismounted boxcars served the roadmaster and his clerk; three tanks furnished fuel

and water for the oil-burning engines. There were five classification and storage tracks, most of which were chronically empty. On these tracks and the main line, the local night crew cut and shuffled cars thrown haphazard into their train by an overworked yard force in the main line terminal about two hundred miles west.

Connie headed straight for the office to study the consist of the incoming train. It was hauling fifty-six cars, and 1610 tons. Bulk of the stuff—including five cars of company fuel oil, three of fresh vegetables, and thirty-five empty flats—was going into Montezuma, desert metropolis 180 miles east. The remaining thirteen cars were headed for Coalberg, an intermediate branch line terminal. These were sandwiched in among the through ones so it would require at least an hour to break up the train and get them together.

The local Deserton switchlist showed three cars of hot asphalt for the State Highway Department billed to Solomon, a peddler ice car, one of copper ore, one merchandise, and two foreign empties to go east. Adding these to the 1600 tons which the train was bringing in, Connie figured more than 200 tons out of Deserton, and close to 1800 over the controlling grade beyond Solomon. The engine rating over Solomon Hill was 1500 tons. If they took more, they would double the ten-mile grade where the branch line crossed the divide into Montezuma Valley.

USUALLY when a crew was caught with doubling tonnage, the conductor set out enough dead freight in Deserton so he could go over Solo-

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mon Hill at one trip, especially if there were extra trains on the line. One hundred eighty miles is a long run for a freight train doing local work. Connie consulted the operator as to what cars he might set out.

"I can leave twenty of these empty flats—" he began.

"You can't leave any of those empty flats," the little operator interrupted. "Uncle Sam's got a lot of army trucks over in Montezuma. He thinks he wants 'em somewhere else. The branch line's taking these flats there so they can haul 'em. I've got two messages saying they can't be delayed."

"Is this company oil hotshot, too?"

"Nope," said Jimmie, "you can set out the company oil and you can leave that car of copper ore. You could leave them two empty foreign boxcars too, if you want Bill to spend the rest of his life explaining why he didn't take 'em. The rest of the stuff has to go."

Connie refigured his tonnage. Without the company oil and the copper ore, it stood at 1494 tons east of Solomon. Between Deserton and Solomon, weight did not matter because the road was level.

"We can take the boxcars," he said. "Unless Bill muddles things when he comes in, we'll leave the copper ore, set out the five cars of company oil, put the train together and highball it out of town."

"Can you get away before that first main comes?" Jimmie asked anxiously.

"I think we can," replied Connie. "If everything goes right, I can switch the whole train by myself and clear out before ten."

Gleason made a poor attempt to conceal his doubts. "I sure hope you do. If old man Connolley comes in and finds Bill Riley in the hilarious mood he was in when I called him, Lord have mercy on his soul and ours."

Just then the local arrived and interrupted their talk. The incoming crew pulled into the passing track, cut off the engine and turned it to the tanks for water and oil. Connie strode out to the platform and studied the train. He was figuring every move he would have to make in breaking up the freight and putting it together the way he wanted.

Soon Riley came over from town. He was a big man, and even his stooped shoulders could not conceal the fact. A year ago he'd walked erect, his ruddy face beaming like a round desert moon. Now lines were cut deep into his broad forehead, his eyes sunken, his vigor gone. Bill's slept-in khakis hung loosely, as he ambled along in a path of his own making. Not far behind followed the boomers along an equally angular route.

Seeing the switchlists in Connie's hand, Riley inquired thickly:

"Watcha got tonight, boy?"

"They've got a doubling train lined up for us," Connie told him, "but by leaving a car of copper ore and five company oil, we can cut it to under 1500 tons and be out of town before the first main arrives."

Riley was drunk enough to want everybody, including his son-in-law, to know he was conductor of his train. Taking the lists from Connie's hand he marched grandly into the office. Before the Luzon campaign he had always sat at the table with a brakeman on either side of him. There he had planned step by step the moves required to break and make the train for its run into Montezuma.

FORCE OF HABIT was strong. He sat at the table that night also; but his deliberations were faltering and uncertain. After scanning the two lists he voiced his conclusions to the three brakemen.

"Helluva lot of switchin' to do tonight," muttered Riley.

"You tellaman we have," returned Windy Dwyer. Dwyer, the swing brakeman, was a squat grizzled individual who had run a train and managed a busy yard before Rule G caught up with him. "There's mos' switchin' in this burg I've seen since I come here two months ago."

Connie listened to comments which were leading them nowhere. The others seemed hardly awake enough to break and make a sixty-four car train before the trainmaster arrived on the scene. He leaned over the desk to Riley and inquired earnestly:

"Could I handle the list for you tonight, and get the train together?"

"And jus' why should you handle the switchlist?" demanded Dwyer. "You're no swing brakeman. I am."

Connie's offer cleared Bill's head a trifle for he inquired sharply: "Are you tryin' to insinuate that me an' the boys ain't capable of doin' our own work?"

"I ain't insinuating anything, Bill," said Connie. "I just thought I might help out with the train and do you a favor."

"We don't need no help," snapped Riley, "an' we don't want none of your favors."

"Tha's right, Bill," the head brakeman chimed in. "Let Mr. Matthews do his work an' we'll do ours."

Bill nodded his approval, and continued to go over the setup at great length with his cronies. Connie stayed in the office until the head man went for the engine, still Riley had no change in plan. He himself took charge of the switching. He ordered Windy to the field to set the brakes on the cars and keep them from hitting too hard when he cut them off. Then he told the head man to follow the engine.

Hot twilight was spreading across

THE IMPACT sent the door clattering down to the track

the desert. Shadows deepened on the western hills; and in the east where the rails circled round the peaks to cross the low dividing ridge, clouds were piling up heavily. Sudden flashes of lightning rent the night.

Connie entered the waycar. Broken glasses and cigarette stubs were strewn over the floor, and the air was stale. The bunks were unmade, and the room in general disorder. Even the contents of the first aid kit had been dumped unceremoniously on the conductor's table, mercurochrome reddening the wooden top.

Repacking the box, Connie arranged the salve, bandages, mercurochrome and bottle of antidote for snake venom, which every crew in desert country carries. When he'd finished he hung the kit back on its two nails under the cupola, and started to clear the mess. Hanging out the rear markers, he stood for a moment on the platform watching the engine clanking by with three men on the footboard, who could neither walk, see nor think straight.

ALL THROUGH the hot desert summer when the mercury climbed to a hundred-twenty and stayed there, the eastbound local hauled ice to the section men who kept the tracks along the hundred barren miles between Deserton and Coalberg. Conductors might carry tonnage in their pockets, or forget Rule G; but they never forgot to carry this "peddler" ice to the men who toiled and sweated in this desert hell. The load was placed in the yard in an empty reefer. Before leaving the yards, Riley's crew backed their caboose and the ice car alongside the highwarehouse platform. Using the platform as a runway, the hind brakeman nightly transferred the stuff from the reefer into the caboose. Later he could kick it off at the section houses as the train ran by without stopping.

This was Connie's work—transferring the ice to the waycar while the rest of the crew made up the train. The procedure was not varied now. In his first move, Riley picked up the ice car, coupled it into the caboose, then kicked both of them up the main line with Connie riding them. Riley kicked them hard. They were cut off at least ten miles an hour faster than usual, and Connie had to work furiously with the club to stop them on one brake before they ran by the platform.

But at last they stopped. Leaving them anchored securely with the caboose brake, he opened the double door of the reefer. There was a space about six feet wide between the car wall and the shoulder-high platform. To cover this space, he dragged a wooden bridge into the car door, and another into the door of the caboose. Then he got out his ice tongs and went to work.

At the east end of the yard, the rest of the crew were cutting and shuffling the train so as to get their short loads together at the head end, the through ones together at the rear. Connie paid little attention to their movements. It was quite dark now and the yard was growing indistinct. Yet even while walking backward along the platform dragging the ice and forward carrying the tongs, he noticed they were giving wild kick signs to the engineer who was obeying them as given.

Occasionally the bulk of a high car would loom up momentarily in the white-light flashing in the east; then there'd be a re-echoing boom as two cars met. The low cars were visible, even when headed his way. Meanwhile, Riley wishing to get the empty flats directly in front of his caboose

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3 Refined LANOLIN is a soothing oil that closely resembles the oil of the human skin. Get Wildroot Cream-Oil from your barber or druggist.

was switching them together on the main line, preparing to shove them back into the caboose.

Connie didn't think they might couple into him without warning. Uppermost in his mind was the determination to get the train together and out of Deserton before Connolley arrived. One by one he transferred nine of the three-hundred-pound cakes, each time backing out of the reefer door ahead of it, dragging it over the runway, along the platform to his caboose. With one more to go, he was wondering how Riley was coming along with his work. As soon as he finished his job he'd go down and see. But he didn't go.

In the office Jimmie Gleason sat at the telegraph table staring out through the thin cloud of smoke rising from his cigar. Perhaps he was thinking of his early youth on the Central of Georgia; or his mind may have been reminiscing of happier days pounding brass for the Associated Press. He was smiling, but this vanished suddenly. His head jerked to one side as he fixed his good eye on a dark line moving rapidly in from the east end.

INSTANTLY he realized that this was the edge of the string of flatcars rolling swiftly up the main line with no light on its end. The chair skidded across the floor as he jumped to his feet, and dashed outside racing toward the platform. Connie was just coming out with his last cake of ice. His figure showed in the dim light as he struggled to drag it along the uneven floor. Three more steps and he would have backed onto the bridge which spanned the gap between the car and the warehouse platform.

The swiftly moving cut of flats was almost into him. They came clicking over the rail joints scarcely thirty feet behind the operator. There'd never be time to mount the platform before they caught up, so Jimmie paused and yelled,

"Stop! Connie, don't come out!"

Connie turned toward the shouting, and started to lean out the door of the refrigerator car. But as he lifted his foot he heard the noise of wheels hitting a rail joint. Without looking he knew that Riley had sent a cut of cars up from the lower yard, and Windy had failed to catch them. There was no time even to grab hold of anything to steady him.

Thirty-five empty flats came rolling in as though the track was clear. They rammed into the reefer, which jumped half its length driving the caboose ahead. The impact jerked the wooden runway out of the door and the door clattered down to the track. Connie shot head first for the slatted reefer floor, and the lights went out.

When he came to the car was standing still. Jimmie Gleason was bending over him, wiping blood from his face with a handkerchief wrapped round a chunk of ce. The operator cursed Riley soundly with each movement, vowing to turn the drunk in if he had to quit railroading and go back to the hobo jungle.

The icy rag cleared Connie's head somewhat. Getting to his feet unsteadily, he went out to survey the damage. Though he expected to find the caboose or the reefer knocked off center, as far as he could see they were in good shape. Then he turned back inside to get tape and bandages only to find the kit had been thrown off its nails. The bottle of rattlesnake antidote had been broken by

the fall, and spilled over all the contents. Angrily, Connie tossed it out on the warehouse platform and went with Jimmie into the office.

At 9:55, the conductor and his swing brakeman came swaggering into the office bragging about their speed. They stopped when they saw Connie sitting on a corner of the telegraph table his face covered with a dozen patches, and mercurochrome reddening his eyebrows. At once laughter filled the small room. Connie's eyes blazed, and an angry flush spread up across his features.

"Shut up, dammit!" he roared. "Next time you birds kick a cut of cars into me when I'm transferring ice, I'll come over and sober you up with a brake club."

The boomer's laugh went on between wisecracks about a student brakeman who couldn't stand up in a car when two came together. Jimmie liked Matthews, and wasn't troubled with any friendship for Dwyer or Riley. A pair of ice tongs lay on top of the Western Union safe. Getting up from his chair, Jimmie reached over and picked them up.

"YOU HEARD what the brakeman said," he warned. "Now straighten that face of yours, or I'll fix it for you. You can't half-kill a man where I'm working, and then stand and laugh in his face."

"Who half-killed who?"

"Figure it out, Riley," Gleason retorted. "This boy was stepping out of that reefer draggin' a cake of ice when you kicked them flats into him racing a mile a minute. If he'd been out on that board, you'd have thrown him under the train and ground him into mince meat."

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"He's been workin' around here long enough to know he has to keep his eyes open," said the conductor defensively.

"Sure, *Mr.* Riley," replied Jimmie, "and you've been here long enough to know the rules. You've had almost three months to come to your senses and that's long enough. Come in here again the way you are tonight and I'll wire the dispatcher to hold up the train till we get a sober man. I'll not keep quiet till you kill a man."

Connie glanced worriedly towards Bill. He was afraid Jimmie had gone too far with the old man. Riley was still drunk and his response was spontaneous. He pulled out his flask from a baggy pocket and drank to "the best damn job of switching done by a bunch of drunks at Deserton." The swing brakeman joined him.

Gleason turned white around the lips. Dropping into his chair he reached for his "bug" and called the dispatcher. Connie was afraid he'd report Bill then; instead he called for orders. They came through quickly: a running order to Coalberg; a message warning the engineer to run under control through the mountains where a cloudburst might wash away track; finally, orders covering the three mains behind him. These were put on schedule superior to him, so he would be forced to run ahead or get into a siding to let them by. First train was due in Deserton within an hour; the others, at hour intervals.

As the operator handed the orders and accepted Bill's signature he said.

"These are the last orders I'll deliver to you while you're in that condition, Riley. If the trainmaster don't catch up with you tonight, you've got two days to think this over. It's up to you, because my thinking's done."

The train left town. Connie assumed that in making up the train Riley had left his excess tonnage in Deserton. That's what he'd have done ordinarily, but tonight he cleared up the yard. They'd double Solomon Hill with 1800 tons, and certainly be stuck at the top of it for the first main. If the train was late they'd have to stay there for the others, too.

There was silence in the dingy, smoke-stained waycar. The engineer yanked the long train out of the yard and headed east through the desert. Dwyer crawled into his bunk made of two coach seats turned together, and was soon breathing heavily. Connie cut the nine cakes of ice into chunks and tossed them off at the boxcar section houses as they rattled by.

Bill Riley slumped at his table making out a messy set of reports. Then he stared up at the three clean patches of wall above him. Once when Connie had gone into the cupola to watch the train, Bill got up and walked over to his locker where he kept the photographs of his three lost sons. Connie wished he'd place them back on the wall, but he didn't. For a moment he fumbled with their cardboard carton; then he took a quick pull at his bottle.

IT WAS 10:20 when they left Deserton. They rolled into Solomon at the foot of the long grade leading up the pass and through the tunnel just two hours later. A dead hush lay over the seven boxcar houses where the section foreman and his men lived. Clouds hung down over the mountain ridge, but no rain fell. Yet the air was dangerously quiet.

The housetrack at Solomon was a

spur with the switch at the west end. The only way an eastbound train could set cars there without shoving them ahead of the engine was to drop them. Making this drop was a two-man job, and by right a three. When the engineer whistled for the Solomon milepost, Riley remembered the three cars of hot asphalt to be set into the spur.

He had no luck with Dwyer. The brakeman was dead to the world and to Riley's shouts. With a muttered curse the skipper switched on his light and struck out for the head end. Suspecting that he'd find the head man the same, Connie went with him. Not a word was spoken as the two walked tandem along the train or while they cut off the cars and dropped them into the spur.

After pumping up the air, they were soon ready to leave Solomon. Twenty-five minutes later the engine hogged down on the hard pull and they stopped to double. Riley had been working on Windy all the way up the hill, rolling him around, shouting at him and trying all means to rouse him so he could cut the train and take it up in two pieces. He was awake now but groggy. Slowly he cleaned the wick of his battered looking oil lantern and started forward over the decks of the flatcars.

The first main was almost due behind them, and Connie went down the track to flag. He walked between the rails, keeping his light on them. This territory was infested with small rattlesnakes called sidewinders. On Solomon Hill they were thick as fleas, and he was on the lookout for them. Tramping a safe distance down the track, he placed two torpedoes on the rail and returned part way to his train. Sitting down on a trestle he waited for the engineer to call him.

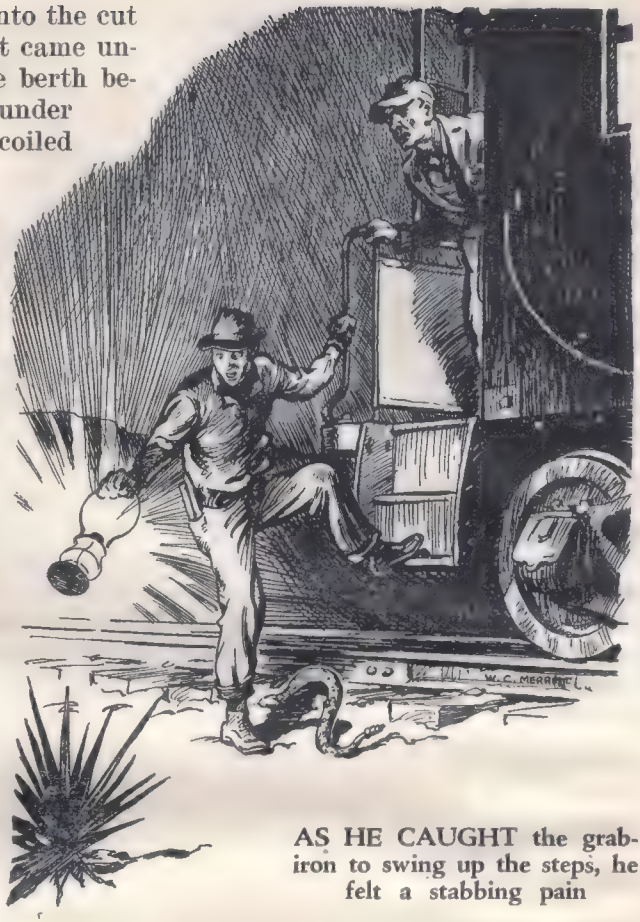
The signal was a long time coming. When Dwyer left the caboose, his brain was still foggy. He forgot he had a long train, that all his heavy loads were in the forward half. He counted off twenty flatcars and cut ahead of them leaving 400 tons on the rear, 1400 in the head. This was almost full tonnage for the engine so it dragged slowly up the ten-mile grade and was gone nearly two hours.

Bill Riley bled the air out of a dozen flats, set the brakes, and carried the red light over to the head one. Placing it on the floor he sat down beside it to wait till his engine returned for the rest of the train. While he dozed a muddly little creature with shadowy splotches on its back, four fangs in its head slithered from

among the rocks. Down into the cut and up along the tracks it came until it found a comfortable berth between two ties. Directly under the rear of the caboose it coiled and settled to sleep.

Connie heard the brasses knocking when the engine was still a long way off, clanking down the hill. It coupled into the flats with the caboose behind, and the engineer called in his flag. The first main was now long overdue. Seeing and hearing nothing of it, Connie left two warning guns below him, lifted the one from the trestle, stuck in a fusee in the end of a tie, and hurried to his train. He strode along quickly, anxious to get his flats across the hill to clear the way for the important trains.

With the engine coupled on and the air up, Riley and Dwyer had left off the brakes and were waiting for him on the platform. A hundred yards from it, Connie highballed the engineer. Bill repeated the signal from the right, the swing man from the left. The hogger answering opened his throttle and Connie trotted up to the waycar.



AS HE CAUGHT the grab-iron to swing up the steps, he felt a stabbing pain

THE SLACK was going out of the train. As he heard the clang of the bumpers and the rattle of beams, he turned onto the shoulder raised from the bottom of the cut. In the confusion of noise he heard another sound familiar to every desert brakeman—the angry buzz of a sidewinder coiled, ready to strike. He couldn't tell where the sound came from, but as he caught the grab iron to swing up the steps, he felt a stabbing pain in his leg between the top of his shoe and the bottom of his overalls.

Immediately he knew what had happened. Up the steps he went, shoving aside Windy. Inside he dropped to the bunk and jerked up his overall leg, peering closely at the bluish print of the four poisonous fangs just above his instep. Riley sensed something was wrong, and followed him inside.

"What's the matter, Connie? What happened?"

"A sidewinder got me."

"When?" Bill came closer to look at the leg. "How long ago, boy?"

Connie looked up slowly. "Just as I come up the steps."

"Well, don't just set there. I'll get the antidote and go to work on it. That'll hold till we get you into Coalberg to a doctor."

Riley's mind became sharp at once. He strode to the locker where the first aid kit had hung. "Where's the box?" he demanded.

The answer came: "It fell off the nails when you fellows threw the flats into me at Deserton. The bottle of rattlesnake dope broke."

"You dumb cluck!" muttered Riley. "Why in hell didn't you get another before you left?"

Connie didn't reply that he'd been too hot in the head to even think. He just let this one pass. His leg had begun to swell and all he could do was watch. Not so Riley; he'd railroaded in the desert before there was such a thing as anti-venom. Catching Connie by the shoulder he toppled him over on the bunk.

"Lay down there," he ordered.

Pouring whiskey into a tin cup, he first dipped in the blade of his pocket knife, then rinsed his mouth and swallowed it.

"What're goin' to do?" said Connie jerking erect.

"Lance this a bit and suck out the poison. Now shut up and lie still."

"Don't be a fool!" shouted Connie. "It'd kill you."

"Better me than you. If I'd been railroading instead of acting like an imbecile this wouldn't of happened."

Connie tried to get out of the bunk but the conductor shoved him back roughly. "Lay down there," he commanded. "Dammit, I'll hogtie you if I have to. Dwyer," he called to the wide-eyed b r a k em a n, "get them leather straps from my locker and help me."

"Okay," said Windy.

There was no use struggling, so Connie lay back. The conductor placed his own body between Connie's eyes and leg, and with four deft strokes of his razor-sharp knife pierced the leg. Then he placed his lips to the wounds and drew out the poisoned blood. Each time he spat out the venom, rinsed his mouth with whiskey, and spat again into the box of cinders.

This was one occasion when Connie was glad his father-in-law had access to a bottle of liquor.

The train had now begun to pick up speed. He paused for a moment to give orders to Windy. "Go over to the engine, and tell that hoghead what's happened. He's not to stop for the rest of our train but head straight into Coalberg as fast as his wheels can turn."

Windy was about to leave when the injured brakeman raised himself on one elbow and inquired, "But what about the mains?"

Conductor Riley gave a gesture of impatience.

"Forget them. We'll run ahead into Coalberg. They're nowhere in sight now, and they've more tons than we. Soon we'll be so far ahead of them, they won't be able to smell our smoke."

Windy Dwyer went out over the flats. Connie could see his light rise and fall as he jumped the spaces between them. Poison was seeping through Connie's body. Pains shot up his leg and he was turning a sickly white. Riley continued his treatment for some time, drawing out more and more of the venom. But in

spite of the attempts at sterilization, he was becoming infected too. Periodically he walked to the forward platform and came back white and shaking.

THE LIGHT FREIGHT clattered up the hill like a passenger train, roared through the short tunnel, and turned down the opposing grade. Downward the road was rugged. Tracks wound around the broken peaks where no tree grew. The path curved sharply through the mountains and stretched over the dry washes spanned by long trestles. Cloudbursts in the mountains made raging torrents of these streams; and each flood was followed by an avalanche of rocks sliding down into the cuts to block the tracks. But the engineer knew both the country and his train.

On they went picking up speed. Gradually Connie began to grow cold. He was afraid at first that this might be the effect of the poison; but soon he knew what was happening. A cold blast of air rushed through the open front door. Then rain mixed with hail fell down upon them. Bill staggered to the front door and closed it, and threw a blanket over Connie.

The engineer had been running rapidly, but as the storm struck he slowed to twenty miles an hour. He pinched the brakes even more as they rumbled over trestles where water was already swirling about the abutments. The mains were now long overdue. Riley was sick, fighting hard to keep his head, but his swing brakeman was now cold sober. Together they watched through the rear door for any signs of the others.

At the conductor's muttered order, Windy went to the rear platform and tossed off fusees every two or three miles. This way any following train would have to keep its distance. He was standing there when the crash came; Bill Riley was forward, Connie in his bunk. Once again that night the youg brakeman felt himself irresistably lifted and thrown to the forward end of the car. There was the sound of rending steel, the rattle of cars derailed. Then the caboose settled back on its wheels, and the echoes died away.

Connie shouted for Bill, and for Windy. Nobody answered. Throwing off the blanket he climbed uneasily out of the bunk. Back on the rear platform he found Windy slumped against the end wall. Connie tried but couldn't wake him. Returning through the caboose he looked for Bill. Not seeing him, he took a lantern and started down the track. Riley lay in the drain with water all around him; and Connie stopped down to examine him more closely. Though he felt as though someone was hammering his head, he managed to lift Bill out of the water and up on the bank. Riley was stunned but still partly conscious.

"That main, Windy. You've got to flag it. He'll be—"

As the conductor was still speaking, the engine whistle sounded a long and three shorts for the flagman to protect the rear. Connie was the flagman. He stumbled back to the car, grabbed his equipment, and hit the ballast in an uneven run. When he'd gone far enough to give the main good stopping room, he placed two torpedoes on the rail. Going back a few hundred feet he set another. Then he sat down to await the train.

There had been moments when Connie felt he was dying; but sitting there as light rain fell on his

face, his head cleared. He'd been sitting there about thirty minutes when Windy came back to see how he fared. From him he got the first details of the wreck. Rocks had come sliding down the mountain and caught the train three cars behind the engine. Sixteen empty flats lay piled up in the cut.

"How's Bill?" Connie inquired.

"I left before I could help him."

"Coming around all right," said Dwyer. "He come to before I did and got me up to see if you needed help. He's gone over to the engine to send the crew into Coalberg for the wrecker."

WINDY OFFERED to take the lantern and fusees to let Connie return to the waycar. But since Connie was feeling better, he sent Dwyer back to stay with the conductor. He was afraid Bill might be ill or seriously injured.

"I'll stay here," he said. "When the train comes, I'll flag it down and ride it in."

"Sure you're all right?"

"Yes, thanks to Bill, I'll be all right," said Connie, and Windy left him.

In the distance there was a growing rumble of wheels broken by sudden explosions as a train hit the two torpedoes, then a third. The engineer in charge was a main line man. Driving down the hill with a steady clip, he was unconscious of any threat of flood or danger. He answered the torpedo blasts, shut off steam, and sloughed his air.

As he rounded the curve and came in sight, Connie flashed a red fusee in his face and waved a stop sign. Half the train went by before the engineer could stop. Then Connie limped along to meet the runner, conductor and trainmaster who came

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back with torch and flashlights to see why they'd been flagged down. Briefly, the brakeman explained how the freight had gone in the ditch.

"It sure was a good thing you guys was ahead of us," the engineer said joyously. "The way I was wheelin' 'em, we'd have had one dirty smash if we'd run into that slide with these loaded Pullmans. There'd have been a casualty list—"

The trainmaster shut him up and turned to Connie.

"Were any of your crew injured?" he inquired.

"All of them were pretty badly shaken up," the brakeman told him.

"All of them?" boomed the official flashing a beam of light in Connie's pallid face. "You don't look so hot yourself. Are you hurt or only frightened?"

"I got snakebit, Mr. Connolley," said the brakeman sheepishly. "A sidewinder got me when we was doublin' the hill. That's how we come to be runnin' ahead of you. Riley was tryin' to get me to a doctor in Coalberg."

"Thank God for that sidewinder!" muttered the h o g h e a d fervently thinking of the casualty list if the slide had hit his Pullmans instead of Riley's empty flats.

"Have you a doctor on your train that can treat snakebite?" the official asked the conductor.

"There should be several in a medical unit just out of the California desert," came the answer.

"Go back and rout one out," said Connolley. "Have him come over to the caboose and look after this brakeman. We'll pull on down there and see how bad the line's tied up."

Connie climbed into the cab under his own steam. The engineer rolled the train up against Riley's waycar, and Connie went back to his bunk. The trainmaster returned to the Pullmans and a few minutes later entered the car with an army doctor. The major examined Connie first tearing off the old dressing and putting on a clean one.

"You can be thankful there was a man on this train who knew what to do, and had the guts to do it," he said at last. Then warning him to take it easy for a while he turned to Riley. The doctor checked up on Bill carefully. Then he gave him a shot in the arm, assured him he'd be all right in a few hours, and went back to his own Pullman berth.

CONNOLLEY WATCHED him leave but remained in the waycar. He was an old-timer who had come up through train service. Nothing seemed to escape his keen eyes. When the caboose was quiet, empty of everyone except the student brakeman and the conductor, he sauntered over to Bill's battered desk. Picking up the long-necked bottle half-full of amber liquid, he sniffed, then had himself a snort. Connie's heart shot up into his throat. *Here it comes,* he thought.

Pat set the bottle down easily and said to Bill: "It's lucky you had this with you, Mr. Riley."

"Yes, sir, guess it was."

"Do you always carry a full quart in the waycar—just for snakebites?"

The official's eye bored into the conductor, as Riley squirmed.

"Nu-no, sir. Not always."

"I was told in Deserton you'd been sufferin' a lot from snakebite yourself lately?"

"Yes, I guess I have, Mr. Connolley." The conductor's eyes sought the empty wall opposite him, then came boldy back to meet those of the offi-

cial. "I've seen a lot of such cases."

"So have I," said Pat, "and most of 'em never get over it."

"But some of them do, sir," said Bill stubbornly.

Riley's chin quivered. Suddenly he walked straight to his locker, removed a cardboard box and took out three photographs. Bill wiped away the accumulated dust hung up the portrait of a proud youth in the uniform of the Air Corps with a maple leaf on the shoulder. It filled a place it had held for eleven months previous to the Luzon campaign. Then the other two were set in their former places on the wall. This done, Bill tossed the box out of the back door, and sat down on his cushion.

The trainmaster was apparently absorbed in polishing the face of his watch with a stubby thumb. For quite some time he didn't look at Riley. It seemed like hours to Connie though it could not have been more than a few minutes.

From down toward Coalberg where dawn was streaking the shadows of blue-black desert peaks, an engine whistle sounded. It was the wrecking outfit coming to clear away the wreck so the mains could be on their way to war. The trainmaster got up and sauntered toward the front door. He gripped Connie's shoulder as he passed.

"You'll be okay in a day or two, my boy. And when you get out again, watch these sidewinders."

"You be careful about 'em too, Mr. Riley," he warned. "Good conductors are hard to get, especially those who've been on the road as long as you have."

He went out then, closing the door behind him. Connie stretched out on the bunk. The showdown on the desert branch had come and gone.

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On *the* Spot

Railfaring Men Sit in with the Editorial Crew to Swap Experiences, Offer Suggestions and Settle Arguments

BOOMER OP. We asked Frank P. Savage, author of "A Night I'll Never Forget" in last month's issue, to tell us about his boomer career.

Frank Savage

"After learning telegraphy in 1890," he replied, "I spent five years in various jobs as student operator, Western Union messenger boy and then as Maine Central clerk and op. While at North Bay, Maine, I copied the wire report of the Corbett-Sullivan ring fight which marked the downfall of the famous 'Boston Strong Boy' at the hands of 'Gentleman Jim.'

"On the afternoon of September 8th, 1901, I was dispatching trains over the old Portland & Rumford Falls line, now the Maine Central's Rangeley Division, at Farmington, and had just begun to issue a train order over the WU wire when Portland broke in with a flash address to Secretary of War John D. Long, who was then visiting at Buckfield, Maine, saying, 'President McKinley reported shot in Buffalo today.' You can readily imagine what excitement that news created. It is a matter of history that McKinley died six days later and Vice President Theodore Roosevelt was inaugurated as his successor."

In 1904 Frank went West to pound brass for the Santa Fe at Williams, Ariz. Shortly after his arrival a heavy rainfall in an ordinarily arid section flooded the line to the extent that through trains were held up several days. During that time a private car was parked near the station and in it were two celebrities: Gen. R. A. Alger, a former Secretary of War, and Lt. Richard Hobson, Spanish-American War hero. The latter went in and out of the depot a dozen times a day and Frank got to know him very well, but the old General kept pretty much out of sight.

"Mexican railroads faced a blockade in 1907," our author goes on. "Sidings and spurs were full of cars, and a hurry call was sent to the United States for help. I was one of those who responded, and for two years I dispatched trains south of the U. S. border. After that I spent a year with the Katy in Texas, a year with the Santa Fe at Raton, N. M., a year with the Missouri Pacific, and then 14 more years on the Santa Fe, mostly the Albuquerque Division. A high point was handling the passenger business to and from the 1915 world's fair at San Francisco. I sat in the dispatcher's chair when the Post Toasties Special made a spectacular dash eastward, like Death Valley Scotty's fast run, and later when King Albert of Belgium rode a Santa Fe engine."

Family illness obliged Frank to quit his job and move to California, but in February '43 he returned to railroading, this time as a Southern Pacific train-order operator at Chiloquin, Ore.

"I was asked to work as dispatcher," he says, "but that is for a younger man. I'm doing quite well here at Chiloquin, where I hope to remain till the war ends. Then, past 70, even a tough old Yankee like me will be glad to settle down in a cabin among the pines, beside the still waters of a beautiful lake, where he can catch up on trout fishing."

* * *

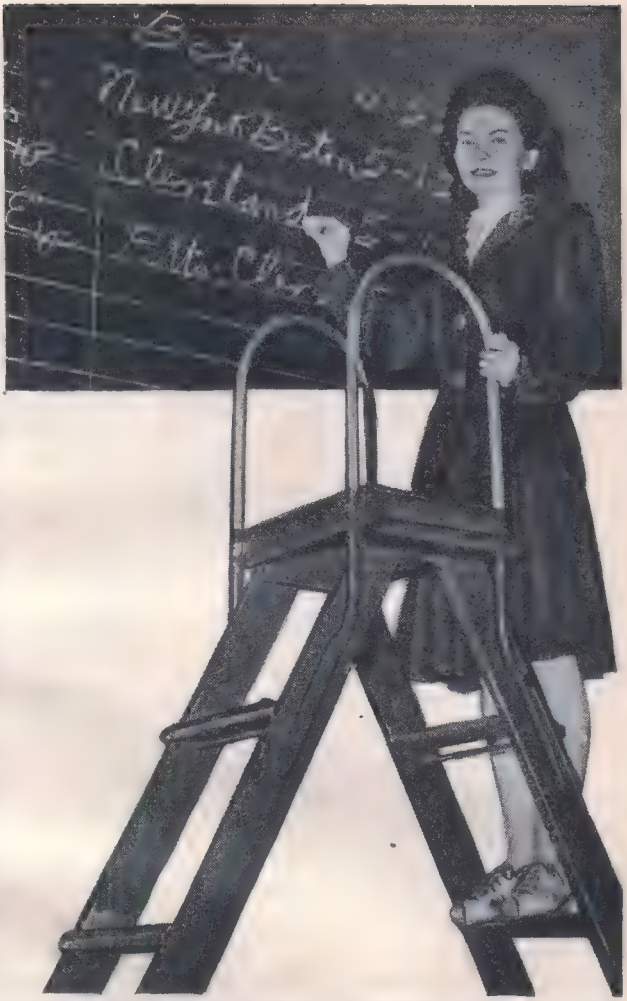
ROUNDHOUSE RED, known to Southern Pacific men as "the railroadingest mutt," died the other day of old age, reports F. P. Anderson, 721 Gull-

wood, San Antonio, Texas. *Red* was mascot of the Austin Street roundhouse in that city —"just an old railroad bum, that's what he was," says Foreman Kidd. All the force loved that 65-pound shaggy beast.

"During the decade that *Red* hung about the roundhouse," wrote Betty Jameson in the *San Antonio Light,* "he had become sort of an honorary member of each of the Big Four Brotherhoods. He was busy day and night greeting engineer, conductor, brakeman and machinist friends, and checking the big locomotives in and out. Old *Red* had a nose for railroad man. An outsider had to go, unless he had *Red's* permission. Practically everyone on the road knew him and inquired about *Red* if he wasn't in sight."

The dog had one bath in this lifetime that the men knew about. That was when he went to a hospital for an overhaul after a crane had hit him. Machinist Louis Parsat recalls the time that *Red's* sooty suit landed him in the dog pound—that animal sure looked disreputable from coal dust and axle grease!—and Parsat and Kidd bailed him out. It was Machinist J. G. Boma who always saw to it that *Red* got his vitamins and calories. On Boma's day off *Red* would trek to the machinist's house on Broadway for his meals and he never went away hungry.

The four-legged railroader was buried at the foot of the roundhouse flagpole, Machinist R. D. Simmons officiating, as a group of his pals looked on with misty eyes. It'll be a long, long while before they forget him.



MARKING TIME on New York Central passenger trains. Mrs. Mary Ann Wnek, 102 Block Street, Buffalo, N. Y., works in the Central's Buffalo terminal while her husband serves with the armed forces in New Guinea. She is one of the very few women train announcers in America

NEW YORK CENTRAL SYSTEM

PHOTO of NYC engine 2203 and train of tank cars which was captioned *(Jan. '45)* as "heading toward an Atlantic port with victory fuel" was taken on the Michigan Central main line at Detroit just west of Bay City Jct. tower. Picture shows the west signal bridge for Bay City Jct. Train is westbound, not eastbound, on track 4. This data comes from John P.

Photo by Joseph Lavelle, 4615 66th Street, Woodside, Long Island, N. Y.

BUILT BY RHODE ISLAND LOCOMOTIVE WORKS in 1895 and photographed thirty years later just outside the engine-house at New Berlin, N. Y., the One-spot of the Unadilla Valley Railway presented a gay appearance with a red smokestack and trimmings to match—and did the boys keep her spic and span! The UV is a 42-mile road between Bridgewater and New Berlin Jct., N. Y., now used for freight only, serving as a feeder line for the Lackawanna and the New York, Ontario & Western

Seehaver, MC operator who is familiar with that territory, having often worked as leverman at Bay City Jct.

"I could tell you plenty of stories about the third-rail zone," he says. "Curiously enough, although several men have been severely burned and many animals killed, I do not know any authenticated case in which a human being met death from a third rail here. Dogs using the third rail for a tree or fire hydrant do it only once. One time the men at 20th Street let a high boxcar of mail roll down under the train shed at 15th Street where the contact rail is in service. Fireworks ensued. Six breakers went out in rapid succession and the car caught fire. One excited fellow grabbed a hose to wet down the fire, but the trainmaster checked him in time. That stream of water on 600 volts would have had a decidedly unhealthy effect."

John offers to answer readers' questions regarding any railroad in or around Detroit, especially about signals and interlocking. His address is 11535 Byron, Detroit 2, Mich.

* * *

BRASS POUNDER. "While I make no claim to having been the youngest railroad telegrapher," writes J. M. Grigg, 5951 S. Tripp Ave., Chicago, "I was only sixteen and a half and fresh off the farm when my seniority began. I started April 1st, 1903, and by August was able to relieve a vacationing agent. Threatened with return to plow handles, I picked up so much speed in sending and receiving that I was given a regular job in September. For a while I copied almost everything that came over the poles, much to the amusement of trainmen who pawed through my waste basket to carry off reading matter for the crummy.

"Near as I remember," the op continues, "train-order hoops came along about 1905. But I got no thrill from passing up a hoop as big as a horse collar, when I was able to palm an order or message with absolute certainty to a fireman or conductor on an engine or waycar moving forty miles or better. My only failure at this was due to the pure cussedness of a runner. One dark and rainy night the local drifted into the station. Engineer Shephard, whom I never saw before or since, picked me off the platform by the wrist as I ran with the hog trying to reach a message up to the cab window. When he let go, I hit the ground with feet between the platform and rail. It took fast stepping to save me from the rolling wheels."

* * *

BILL ROHDE'S fiction story, "The Hard Way" *(Dec. '44)* draws fire from James O. Yates, 917 Clinton St., Hoboken, N. J. Jim is a longshoreman, a retired sailor and somewhat of a railroad man, having worked on Wabash car ferries, the Hudson & Manhattan electric road and the Brooklyn Rapid Transit, not to mention Southern Pacific Steamship Lines. He commends Rohde's literary ability but challenges the author's method of unloading locomotives from ships, especially remarks about the locomotive tipping.

"As an experienced longshoreman," he says, "I can tell you that the center of gravity of a heavy object to be unloaded must be found exactly to the inch. This is a mathematical job of dimensions and where the weight is. I have never seen a locomotive handled with a wire-rope sling. If the weight runs around 60 tons, wire could cut into less sturdy parts of the engine and break them.

"Ship's officers usually know very little about handling engines. If Rohde were talking about discharging flour or canned peas, his system might be probable. He writes, furthermore, that the crew were put to work taking off turnbuckles and chain lashings. That would be a very unusual crew. If I know sailors, most of them probably would be ashore. Less than half of them would be aboard, with the bulk of the crew probably too drunk to be useful."

COLORED BRAKEMEN. Inquiry in January issue about the number of colored brakemen in the North added two more Negro shacks to our small list.

"When I was small," writes George R. Williams, Box 44, Nevada, Ohio, "I knew one named Bob Campbell on the Ft. Wayne Division of the Pennsy. Bob was liked by the passengers of his accommodation run, most of whom were short-haulers and regular customers. At that time Pennsy coaches were lighted by candles six inches long, one and a half in diameter. Two candles fitted each fixture, and six to eight lighted a coach. I remember seeing Bob replace stubs with new ones along the way. As a special privilege, he gave me several stubs, which we burned after dark."

Another colored brakeman in the North was working on the Boston & Albany between Hudson and Chatham, N. Y., some years ago, at the time a boomer named George R. Carpenter first went braking on the New York Central's Hudson Division. George is a member of the Brotherhood of Locomotive Engineers, Div. 23, and now lives at Madisonville, Ky. He adds:

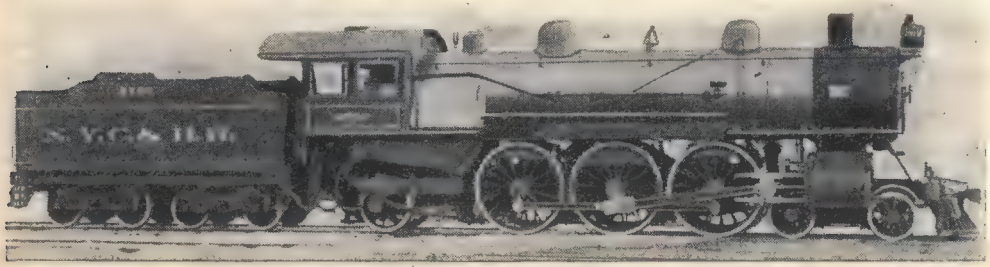
"Negro engineers, firemen and switchmen, bossed by a white yardmaster, make up all the locomotive and yard crews of Scullin Steel Co., a huge St. Louis plant that molds locomotive frames and other railroad equipment."

MONON ROUTE BACK in 1887 or '88 two lads, Marshall L. Wilson and Lee R. Woodward, both sons of dispatchers on the old Louisville, New Albany & Chicago (now the Monon), traveled from Lafayette, Ind., to Crawfordsville Jct., where they spent the best part of a day investigating the countryside, annoying the operator, and hanging around the lunch counter. Marshall, who now lives at 5230 Boulevard Place, Indianapolis 8, Ind., continues the story as follows:

"We rode down on engine 46, with Engineer Whetsell and Conductor Jim Ross. In my mind I can still hear the deep-toned whistle of that locomotive—one of the last of the diamond-stacks. Crawfordsville Jct. was then a busy railroad town. We boys liked the old Junction very much. The roads which made it active were the Vandalia, the LNA&C and, I believe the PD&E, all operating now under other names. After the war I'm going to revisit the Junction to see if it has changed as much as I have in nearly 60 years. Would like to hear from anyone who remembers the place as it used to look when I was a boy."

Marshall recalls the typical old-time passenger conductor strutting through the coaches with his diamond stud or tie-pin and big flashy watch chain and charm swung across his vest; and plunges into another story about Indiana.

"The road, Baltimore & Ohio. Number 7 was an accommodation passenger train, while Number 1 was an express, and



THE 2703, a straight-boilered Pacific, was smart-looking modern power in the days when the New York Central system bore the name New York Central & Hudson River Railroad

Photo from Guy H. Peifer, 20 Cottage Pl., Port Richmond, Staten Island, N. Y.

RARE is the word for this shot of a Philadelphia & Reading train with P&R crew stopping one Sunday in 1906 at Mechanicsburg, Pa., the Washington Street station of the old Cumberland Valley Railroad (now Pennsy)

Georgia was a town with a 40-car passing track, a small station, four houses, a general store and a country school. I was a trick dispatcher making a regular monthly trip over the divisions and was riding Number 7's engine. After pulling into the siding at Georgia we proceeded to its west end near the depot. The conductor and engineer went into the station to get some time on Number 1. After they had been inside for a while I climbed down from the cab and belatedly followed them. I got inside just in time to turn around and see Number 7 creeping out onto the main track, the air having leaked off her brakes.

"The express coming up at that moment sideswiped our engine and both trains became wedged into a cut west of the station. It was a terrible pile-up. Wrecking equipment from both east and west was ordered out, and about 10 p.m. they had traffic moving again. The dining-car on Number 1 was damaged so badly that food could not be prepared in it, so the wrecking bosses and the dining-car crew pooled their food and fed every member of the crews and all passengers. Without those rations a lot of folks who had probably never before known real hunger would have been famished. A passenger named Cunningham, from St. Louis, told me that until that day he had thought railroad men in general were a tough lot, but this incident had given him a better understanding of them."

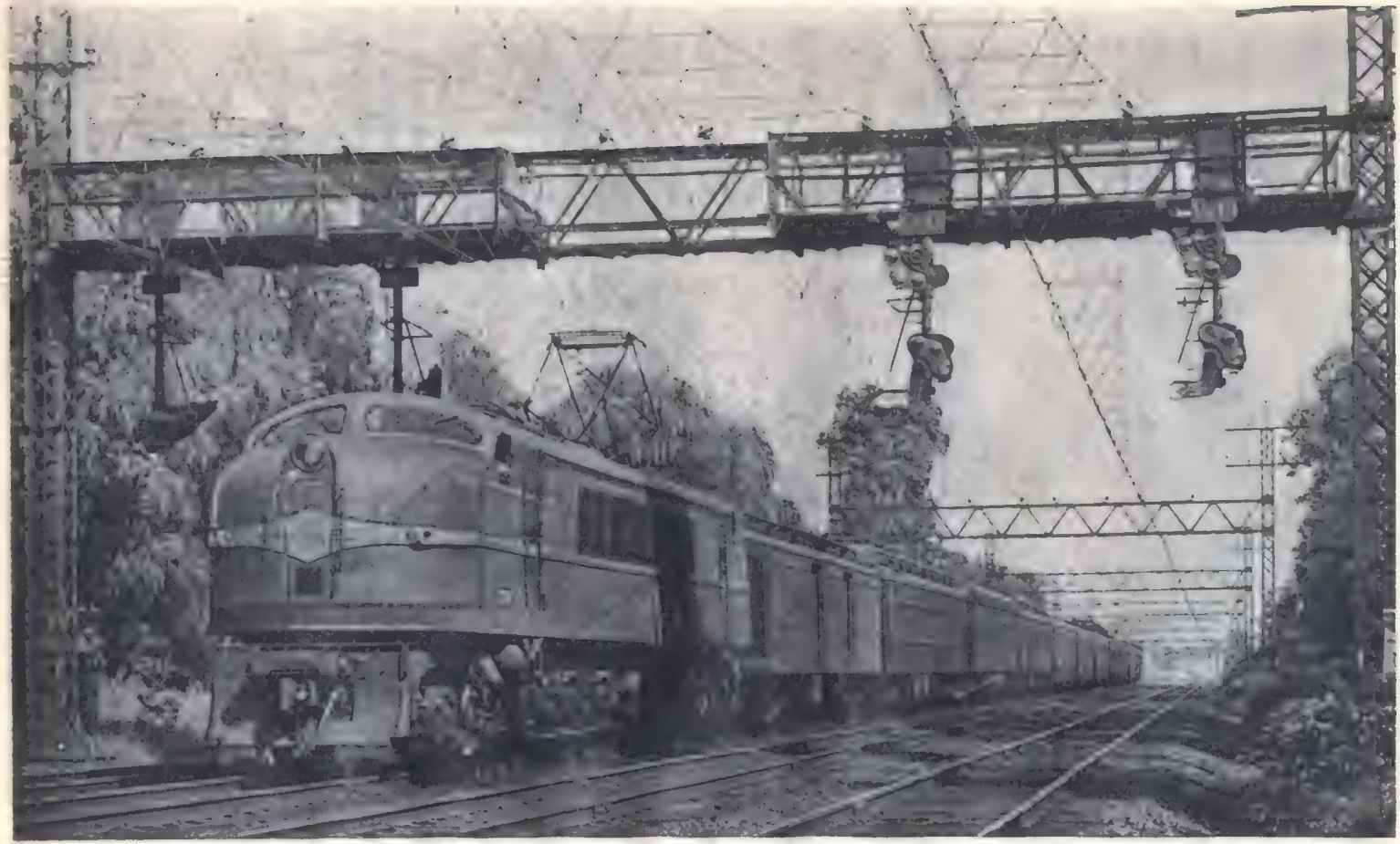
THREE IS OUT. About 25 years ago a passenger hit upon a scheme to ride the cushions free. It worked once, twice, but the third time—Walter Dawson, 2966a N. 22nd St, Milwaukee 6, Wis., tells what happened.

Johnny Quirk, his father's cousin, was conductor on the Chicago & North Western, running between Janesville and Watertown, Wis. Just after they had pulled out of Janesville one day, Johnny began collecting fares. All went well until he met with an individual who waved a $100 bill under his nose, saying he'd had no time to buy a ticket. Now, no respectable conductor carried that much change, so a free ride for the gentleman was the result.

A few weeks later, the same person worked the same stall with the same effect. But Quirk was prepared for the third attempt, which came several days later. Johnny and his brakeman collected a sack of pennies, nickels and other coins to be ready for that century note. When the worn bill made its reappearance, Johnny grabbed it, signaled the shack, and the chiseler received his change. A harrassed-looking man departed at his usual stop amid gales of laughter.

* * *

IN THE FAR EAST. One of the most interesting Christmas cards we have received came from Pfc. Robert F. Clifford, 39459082, 21st Photographic Rcn. Sqdn., 14th Air Force, APO 627, c/o



NEW HAVEN ELECTRIC SHORELINER smoothly and rapidly clips off the miles between Boston and New York City—a far cry from the ancient stagecoach that once rattled along Boston Post Road

Postmaster, New York City. Bob, who worked on the Northern Pacific and the Spokane International, is now stationed in the Far East, at a spot remote from civilization but still within reach of U. S. mail.

"I subscribe to *Railroad Magazine,*" he writes, "and greet each incoming copy like an old friend—part of home wrapped up and sent to me once a month. I am glad to share it with the other men, especially Sgt. Virgil G. Jackson of our Tri-Metrigon Section, the only other railhobbyist in these parts that I know of."

Bob's Yuletide greeting carries a photo of the Yunan Railway, Indo-China (gage, 3 feet 6 inches). It shows two French-built locomotives, one a 4-4-0 type, the other 2-8-2T.

"I am now located at an advanced base where there are no railroads to photograph, much to my regret," he adds. "Occasionally Jap planes drop things on our fields. Aside from that, life here is interesting and not too hard."

* * *

ARTIFICIAL RESTRICTIONS. The Santa Fe's capacity and efficiency were hampered unnecessarily for many years, reports F. G. Gurley, President of the AT&SF.

"Under Arizona law," he says, "we were prohibited from running freight trains in excess of 70 cars, or running passenger trains consisting of more than 14 cars. Under an agreement with the trainmen, made more than forty years ago, we were prohibited from handling more than 50 loads into San Bernardino, Calif., from the East. This rule had persisted despite many improvements in the art of braking during those forty years and despite other improved facilities. Under another agreement with the train crews we were prohibited from hauling more than 2900 tons with doubleheaders between Needles, Calif., and Winslow, Ariz.

"Our yard tracks, our passing tracks and the pulling capacity of our locomotives throughout a period of years had been attuned to these artificial restrictions. Following the outbreak of war, the Federal Government, functioning through the Interstate Commerce Commission, issued orders which resulted in our being freed of these artificial restrictions for the duration of the war.

"The important point about it, however, is that until we could get locomotives with greater pulling capacity and build longer sidings and extend our yard tracks, we were not in position to do much about increasing our efficiency and our capacity. So while we were moving the heaviest transcontinental business we ever had experienced, it was necessary for us to build these longer and additional tracks and to acquire the locomotives as quickly as possible. This we succeeded in doing.

"The State of Oklahoma also passed a 70-car limit law in 1937 and that, too, was set aside for the duration of the war; but in Oklahoma we were able to return immediately to an efficient method of operation, the difference between Arizona and Oklahoma being that the Oklahoma law was passed after we had built up an efficient transportation plant.

"If it had not been for the removal of these artificial restrictions and the enlargement program which was adopted immediately, Santa Fe could not have met the war demands as we have."

* * *

EARTHQUAKE. By April 1906, Espee's plans to standardize the narrow-gage South Pacific Coast line between Alameda and Santa Cruz, Calif., were complete. But Tom Ahern, supervisor of the job, felt old Jim Fair would turn in his grave before the work was begun. Mr. Fair, mining magnate and promoter, had left little doubt about the road's gage. "Narrow she will be, and narrow she will stay," he'd said. And on April 18th, day set for the change, it looked though the old boy was right. Earthquakes rocked San Francisco and put an end to the preparations for a time.

Fred W. Hoover of the Engineers' Club, 32 West 40th St., New York City, commenting on Billy Jones' "South Pacific

Coast" *(Dec. '44)* tells some of his own experiences with that road.

"During 1905, and part of '06," he writes, "I was chief clerk for Engineer W. C. Edes of Espee's Northern District. Plans to widen SPC gage had been under way for months. Every other tie had been changed; third rail and switches placed. North from Santa Clara, everything was ready for the last regular train to pull out. Work crews would follow behind to help section hands with job of standardizing. At Newark, halfway between the terminals, the two narrow-gage trains would meet and be sidetracked.

"That morning I was up before five to keep an appointment with Roadmaster Ahern in the Oakland terminal. But at 5:06, as I was dressing, there came a dull roar and suddenly the house began to revolve. Chimneys toppled; plaster fell from the walls and ceilings. Outside, people gathered in the street.

"I hurried through the crowd down toward the track. Tom and two section men were there with a hand-car—but as yet, no train. It had been held on the opposite side of the estuary, since the bridge-tender declared the crossing was unsafe. Using the car we scuttled over the drawbridge to the Point. As we approached the roundhouse, there were obvious signs of the damage.

"The Point had two water tanks: an old wooden structure so lopsided that the lower part had been shored up with discarded bridge timber; and one newly built with tubular supports set in concrete. The 'condemned' tank was standing while the other had been snapped from its iron framework. The engine scheduled to pull us over the line, had been caught on the table while the ground shook. Now she lay upside down in the pit. Track along the Mole had shifted badly, heaving up along the filled in portion. At once, I realized it would be useless to consider the work of reconversion. From our vantage point at the ferry terminal, we looked out over a flaming San Francisco."

The two men returned to Oakland by hand-car. Heading on to San Francisco,

From B&O Magazine

they soon arrived at the Espee office building. Fred climbed the ten floors over risers on the stairway, where the marble treads had broken and fallen out. When he reached his office, Patrick Kindelon, Chief Special Officer of the Espee State Police was there. Fred's window showed the Barbary Coast burning madly, and he could see their section was doomed. Fire equipment was already being withdrawn and some abandoned; Spring Valley water mains had broken. Fred loaded all the card reports and the General Manager's work orders into a mail sack, and carried them to the Oakland Bank vaults for safe keeping.

"Pat Kindelon armed me with a police commission and badge," he goes on.

IN CREW DISPATCHER'S OFFICE. These girls, employed by the Baltimore & Ohio at Riverside, W. Va., are Wanda Newlon, clerk to caller, and (at phone) Dorothea Lang, relief clerk. Wanda is the daughter of a B&O engineer and the sister-in-law of Grafton, W. Va., yardmaster. Man at left is Condr. A. B. Harris

"Martial law had been declared, and General Funston put troops in the lower Market St. area. The following morning, I reported to Oakland Pier, where E. E. Calvin, Vice President and General Manager, had set up headquarters. All official cars were moved down and switched onto the upper end of the Long Wharf spur.

"For several days we lived there, evacuating refugees from the scorched city. The pier held the only live circuits to the East, and they were hot. E. H. Harriman, head of the whole system, ran special to the Coast, and gave orders to re-establish quarters in San Francisco. Some days later we were located in the nave of the Ferry Building at the foot of Market Street.

"Little thought was given to the South Pacific Coast road at that time. It was operated as far south as Wrights, northern portal of the big tunnel through the Santa Cruz mountains. Damage within it kept trains out of the tunnel, and I was on hand the day Mr. Edes investigated the trouble. There was a smell of gas at the mouth, and since we had no electric torches in those days, Edes borrowed a large mirror from Matty's Tavern nearby. This was set up so it reflected light

into the bore. About 600 feet from the northern opening, the bore with its timber and track had shifted several feet. The reconstruction job began later."

* * *

NINE of Utah's 29 counties have no rail lines within their borders, laments Hugh F. O'Neil, 2434 Monroe Blvd., Ogden, Utah, who is head of the pay-check bureau on the SP's Salt Lake Division, issuing checks for some 5000 employes. Hugh corrects our statement in the Jan. '45 issue, page 26, that the Gulf, Mobile & Ohio trestles extending for 6 miles across Lake Pontchartrain is the world's longest. He reminds us that the SP trestle over Great Salt Lake is nearly 12 miles long, with an additional fill of almost 12 miles, on the Lucin Cutoff.

This cutoff was the scene of a train wreck in which about 50 persons met death on the last day of 1944. A few hours later the February *Railroad Magazine* came out with a leading article, "Brigham Young's Road," dealing with that section. The author, David H. Mann, covered the disaster as staff protographer for *The Deseret News* of Salt Lake City and had a signed article about the wreck on that paper's first page the next day.

* * *

"BLIZZARD, Bath and Breakfast," by Marshall Schaeffer *(Nov. issue)* recalls memories of the C&NW, Black Hills Division, to R. J. McDonough, Arcadia, Wis., who was second trick telegrapher at Merriman, Neb., at the time of that incident.

"I believe more livestock was handled on that division," he tells us "than on any other in the West. It was a boomer's paradise during the stock rush. During the peak periods nearly a train a day passed through Merriman, bound for South Omaha and Sioux City, and I helped bill them.

"Winter storms were common. Trains were stalled in snowdrifts for days until plows could open up the main line. I worked for a shift at Belle Fourche terminal of the C&NW, where everything turned on the wye before heading back to Rapid City. Rail was light, power small, and therefore tonnage ran low and trains had to move fast on the single track. Dispatchers worked three ways. We had to hit the ball once we had the stock rolling.

"Some years ago I joined the Green Bay & Western, where I've grown enough whiskers to weather any depression."

* * *

"NEW MAN" *(Dec. '44)* told how John Johns seeking a job as fireman one cold January afternoon in 1920, applied at the New York Central's West 72nd Street yard in Manhattan but was dressed so fastidiously that a one-armed official named Edwards rejected him. The tale was read by a daughter of this official, Mrs. H. C. Daniels, 2121 Cedar Ave., N. Y. City, who says her father's full name was Charles Addison Edwards and denies he was known as "One-Arm" Edwards.

"This article is false in depicting my father as unfair and illiterate," she adds. "He was kind and generous, always helping young people to advancement, and shouldered the handicap of the loss of a right arm in such a way that family and friends were hardly conscious of it. He died at 80, beloved by all who knew him."

* * *

CANTON VIADUCT photo in our Jan. '45 issue keenly interested Payson C. Francis of Turner Construction Co., N. Y. City. Payson owns a 6-inch tile, made probably between 1890 and 1900, showing this structure. The tile is part of his collection of about 100 pieces of glass and chinaware with railroad motifs. He writes:

"The Boston & Providence (now the New Haven) was completed through that section in 1833, except for a space between two hills in Canton, Mass., about 30 miles east of Providence, R. I. Passengers had to leave the train there and climb to another train waiting on the opposite slope. The viaduct, spanning the

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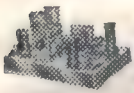

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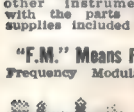

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Neponset River's east fork, was built in '34. The first train crossed it in August that year. The horse which served as motive power for the derrick in raising the stone used for the viaduct is said to have been given the honor of preceding both men and trains across for the first time.

"Reputedly designed by a relative of the artist Whistler (best known for his 'Mother' picture), the dam structure is hollow and at the northeast corner has a loose stone where you can climb inside. A vulnerable point in the Boston-New York rail link, Canton Viaduct is well guarded in wartime because of valuable freight hauled over it."

* * *

AFRICA HEARD FROM. "Copies of *Railroad Magazine* sit in proud state on the OWI magazine rack here and are very popular," writes Shirley Chidsey, who works at the American Consulate General in Leopoldsville, Belgian Congo.

* * *

WHO can supply information on the murder of Harry Wesson, Atlantic Coast Line engineer? The query comes from John W. Newbern, Rte. 1, Box 56, High Springs, Fla., a retired ACL conductor who is assembling data on his 48 years of railroading.

"Harry was a friend of mine," he says. "We spent many happy days together on the road."

Some of the facts, as Mr. Newbern recalls them, are these: A Negro from Palatka, Fla., was unjustly convicted of the murder and was sentenced to be hanged, in the days before Florida adopted electrocution for capital punishment. When the prisoner was led up to the gallows and the death sentence read, the wrong name was found to be on the document. So his life was spared and his sentence was commuted to life imprisonment. The convicted man, although innocent, was compelled to spend several years in state prison at Raiford, Fla. Finally the real murderer confessed on his deathbed. The prisoner was freed and went to live at Ocala, Fla. Our correspondent would like to get names, dates and other details of this unusual case.

* * *

WANTED: Any information about the Grand Trunk 4-4-0 type engine which blew up at Bayview, near Hamilton, Ont., Canada, 25 years ago. James E. Platt, 99 Mountain Park Ave., Hamilton, believes she was numbered in the 1909-1919 series, Class H1.

"In these days of larger power," he comments, "it's interesting to see the line-up of small locos assigned to the Canadian National at Hamilton. Nine, sometimes ten, old Moguls of the 900 class run regularly from here. This constitutes a record over any other point on the CNR or American roads, doesn't it?"

* * *

BROWNIES. Aboard an Army transport that has landed troops in Alaskan islands, Sandy Moss finds time hanging heavy and sets down his recollections of a braking career that ended long ago. Sandy, whose address is Barracks 113, Hanford, Wash., has this to say:

"When I applied for a job as brakeman on the Louisville & Nashville between Howell, Ind., and Nashville, Tenn., back in 1910, Trainmaster E. L. Wise hired no cigarette smokers. But at the time they were short-handed, so I was taken on as a 'mule,' or fourth man, on the local. Within fifteen days I was examined, and that very night I got my first brownies.

"My first run was also a maiden trip for my engineer and conductor, and the second for the other brakeman. Since I had a standard watch, I acted as flag. When we rolled past the second station we were just ahead of a crack passenger train on short time. Much snow fell that morning and as we pulled off the main the switchman dropped his key in a high drift. Behind us lay a wide curve and we could already see the passenger. Conductor Savely ordered me to cover the

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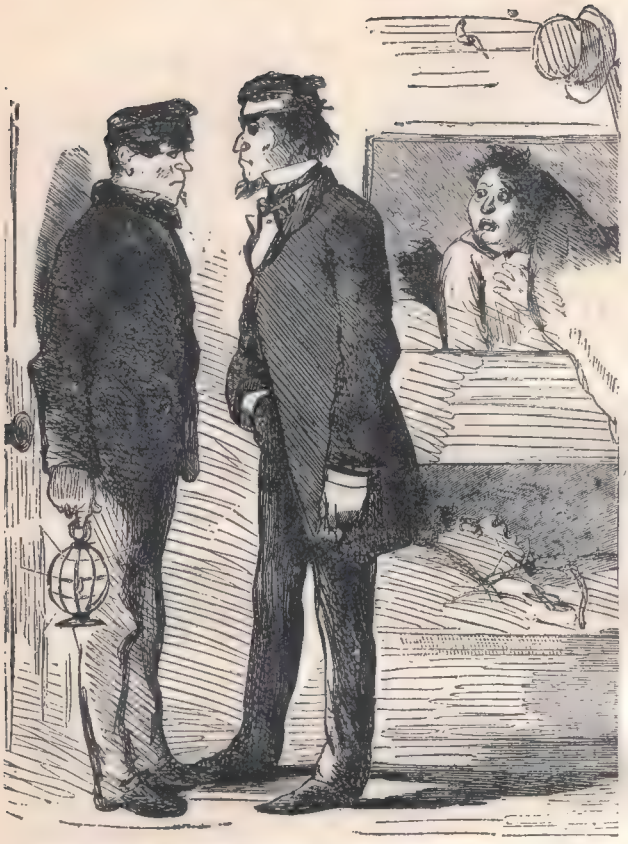

From Harper's Weekly, May 28, 1859; courtesy of C. L. Winey

CONVENIENCE OF THE NEW SLEEPING-CAR
(Timid old gent in upper berth listens)

Brakeman: "Jim, do you think the Mill Creek is safe tonight?"

Conductor: "If Joe cracks on the steam, I guess we'll get the engine and tender over all right. I'm going forward."

rear. Grabbing my equipment, I hot-footed it down the track. I ran fast but not far. Stubbing a toe, I fell and broke my red light. Right then I knew I'd never make it in time, so I set off my fusee, hoping the runner would see the reflection of the red glare on the snow. But in another minute the headlight rounded the turn, and the engineer wiped the gage. For short-flagging a varnish, they gave me a nice bunch of brownies.

"Not long afterward," Sandy continues, "I was braking ahead for Buddy Hawes. The engineer asked me to fire awhile for his man, who felt sick. I had put in about three fires and the pressure was rising when we heard a queer sound from the firebox. The gage showed plenty of water, but Engineer Hampton tried the test cocks, too. I'd just put in another fire and was closing the door when the explosion hit us. Live coals burst out over the gangway as I joined the birds, landing in the mud. The unlucky fireman broke his leg in a jump through the cab window. On the running board, the engineer tried to whistle a flag but the boiler was dead.

"Then I walked two miles to the nearest station, and told the op all. Borrowing an engine, I rode back and pulled ours into the clear. For this they removed some of my demerits, and called the accident of dropping 17 staybolts a mud burn, which made everyone happy.

"I quit the iron trail a long time ago," he concludes, "but not before I accumulated more brownies, and a lot of memories that make me lonesome each time I hear a long crossing whistle."

* * *

TWENTY-TWO years ago, when T. B Russell was working as a Union Pacific dispatcher, he had occasion to represent in an investigation an engineer charged with violating Rule 11. It seems the accused man had failed to stop and extinguish a fusee burning red on the Denver & Rio Grande track while running on the parallel UP track. That investigation got nowhere, according to Russell, who now lives at 647 Grove St., N., St. Petersburg, Fla. The argument resolved itself down to the question of what was meant by the word "near," and the

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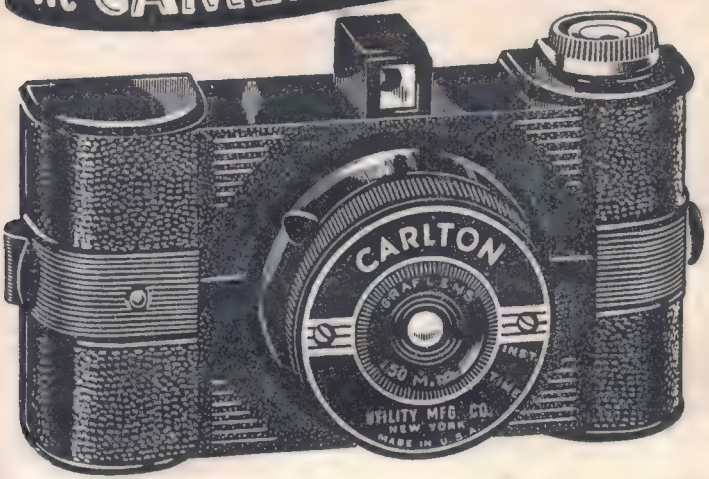

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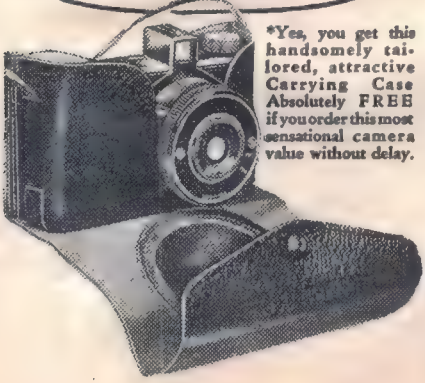

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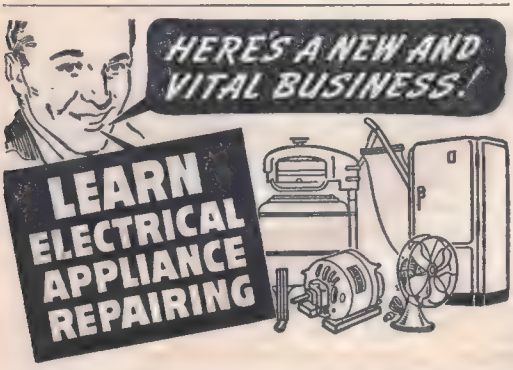

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hogger continued working, as they were unable to pin anything on him.

"This case came to mind," Russell continues, "when I read of an incident that occurred later on the same stretch of track, a true tale entitled 'Right Train, Wrong Railroad,' by Otto Biddle, in Oct. '44 *Railroad Magazine*. The picture you published of the Southern Pacific's Tucson office reminds me of the changes that have taken place in the train dispatching profession since those glorious boomer days when you seldom walked into a new office to work without meeting one or more men with whom you had worked elsewhere. Today it is not unusual to find offices where all the force are home guards, men who know there are other railroads on earth only by reading their names on passing boxcars. This condition has been caused, of course, by the extension of seniority rules. Personally, I believe it is a detriment to both the dispatchers and the railroads. At any rate, the old boomer system was more fun."

* * *

STREAMLINED Missouri & Arkansas cars 705 and 726 *(pictured in Jan. issue)* on the 286-mile run between Neosho, Mo., and Kensett, Ark., have been replaced by a pair of 4-6-0's, two U. S. Post Office cars and a couple of time-worn but comfortable wooden coaches. For eight years the streamliners did a fine job. But two percent grades and light tracks, coupled with a seven-day week, overtaxed the modern ACF railcars.

"The M&A is in a state of excitement," reports Pfc. Roy E. Covert 19132403, Co. E, 840th STB, Camp Crowder, Mo. "When passenger equipment began falling apart in October the road filed application for abandonment of passenger service. A few weeks later the line's repair shop burned, complicating maintenance; and on top of this the Santa Fe inaugurated a new schedule running ahead of their train. Perhaps this last was what decided M&A to stage a comeback. Service is to be resumed over Kansas City Southern rails between Joplin, Mo., and Neosho; and

new equipment is on order. Trainmen predict that No. 705, reconditioned with parts of the 726, will return in use over the gradeless line between Kensett and Helena, Ark. Meanwhile, an interesting handful of coaches and light engines roll over this fine little road."

* * *

WANTED: Information about Walter F. Russel, boomer conductor; born in Williamsburg, Mass., about 1850; worked on Fitchburg RR out of North Adams, Mass., in '85; later on Long Island RR.; then on Denver, Texas & Ft. Worth out of Trinadad, Colo. later on CNE&W between Campbell Hall, N. Y., and Canaan, Conn.; last heard from while on N. Y. Manhattan El in '91. Send information to his nephew, W. R. Andrus, a retired rail of 30 Phillips St., Greenfield, Mass.

* * *

NOW we come to the song and dance about the Reader's Choice coupon *(page 146)*. The purpose of this is to guide the editorial crew in selecting material for future issues. Some rails use the coupon. Others prefer not to clip the magazine; they send us home-made coupons or express their choice in letters and postcards. Regardless of how votes are sent in, all count the same. Results of balloting on our February issue show these titles listed in order of popularity:

1. Brigham Young's Road, *Mann*
2. True Tales of the Rails
3. Harvey Girl, *White*
4. Under Two Flags, *Waters*
5. Smoke, Sparks and Stacks
6. Light of the Lantern
7. Electric Lines, *Maguire*
8. Locomotive of the Month *(PRR 6200)*
9. On the Spot
10. Why the Train Was Late, *Berry*
11. Railroad Camera Club
12. Along the Iron Pike, *Easley*

Most popular February photo, aside from "Locomotive of the Month," was the Union Pacific scenic on page 28, followed by shots of a Canadian Pacific troop special on 28 and the *Portland Rose* on 63.

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—Lucius Beebe in New York Herald-Tribune.

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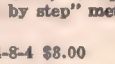

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Because of time needed to edit, print and distribute this magazine, material must be sent to the Editor at least seven weeks before publication date. Redball handling is given to items we get the first week of each month, if accompanied by the latest Reader's Choice coupon (from page 146 or homemade).

Due to scarcity of space, we prefer that no reader be listed here oftener than once in three months.

Use the customary abbreviations and photo sizes. The terms *tts.* refers to public timetables—unless preceded by *emp.*, when it means employes (operating) timetables.

(R) indicates desire to buy, sell or swap back issues of *Railroad Magazine* or its predecessors, *Railroad Man's* or *Railroad Stories.* (Specify condition of each copy.).

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Switch List

JAMES H. ADY, T/5, 39264777, Co. C 4, 728th Ry. Opr. Bn., Com. Z ETO, APO 562, c/o Postmaster, New York City, will buy tts., emp. tts., pix, passes, tr. orders, etc. of SP, UP, Santa Fe, Tonopah & Tidewater.

C. P. ATHERTON, Box 922, Clifton, Mass., will pay 50c ea. for p.c. or larger pix of B&M locos 627, 1447, 1463, 1473, 1485, 1492, 2416, 2427, 2601, 2613. Will send 5x7 print of any B&M in exchange for B&M loco pix list.

HOWARD D. BEARD, 50 Oakwood Ave., Troy, N.Y., will buy size 122 pix of NYC locos, 5400 series.

(R*)-LEE BEAUJON, Canaan, Conn. will sell *Railroad Magazine,* Jan. '43 to Dec. '44, good cond.; 1929 and '42, *Moody's Public Utilities Manuals,* showing US and foreign trolley lines. Also sells tr. orders of New Haven, Berk. Div. or trades for NH (CNE and Housatonic) articles and pix.

RICHARD BENJAMIN, 1990 N. Park Ave., Tucson, Ariz., wants pix of Mexican, Central and South American steam and elec. locos, terminals, stations.

ROY BOBO, RFD A2, Collinsville, Ala., wants size 116 or p.c. pix of AB&C, ACL, L&N, SAL, and large pic of UP *Big Boy* in Weber Canyon.

(R) FLOYD BRUNNER, East Marion, N.C., will trade Clinchfield rulebook for '38 issues of *Railroad Magazine,* good cond.

CARL L. BRYANT, 209 Spring St., Greenfield, O., will trade or buy tts., any road. Send list.

(R) DON CHRISTENSEN, 1109 Roosevelt, Ames, Iowa, will buy *Railroad Magazine,* May '33, Dec. '34, March '37, April '42; good cond.

(R) LLOYD R. CLOUSE, *you forgot your address.*

HARRY COTTERELL, Jr., 36 Alexander St., Newark 6, N.J., will buy pix of Ohio Southern (DT&I) station at Thrifton, O.; also DT&I emp. mag. issued during Ford regime.

(*) DICK CUMMINGS, RT/2c 617-791, USCG Unit 82, FPO San Francisco, Calif., will buy old Derrick guides, trolley wayfinders, and literature on old Bay State St. Ry., and of all New Eng. lines.

(*) DANIEL CURRY, 43½ Belvidere Ave., Columbus 4, O., wants list of interurban lines in Ohio, Indiana, Illinois, Iowa; will buy tkts. and pix of SLB, or trade

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(*) Lt. BARTON K. DAVIS, Perrin Field, Sherman, Tex., will buy pix of IRR, PSCI wooden cars; any size pix of WCF&N obs. car, Ohio Elec., Western O., Miami Valley; Dayton & W.; Dayton, Cov. & Piqua; Springfield, Troy & Piqua; Indiana, Col. & E.; Toledo, Fostoria & Findlay; TBG&S; Dayton & Troy Elec. pass. cars. Trades Frisco, Katy, NYC tr. orders for Pennsy, SP, C&NW.

D. B. DAVIS, 42 E. Sinclair St., Wabash, Ind., will sell or trade sizes 116, 120 pix of Wabash engines for other locos.

BARNEY ENGHOLM, 19015 Shelburne Rd., Cleveland 18, O., will buy tts. of foreign roads, also maps and transfers of foreign cities. Send lists.

(R) CHAS. R. FERGUSON, 514 23rd St., Oakland 12, Calif., will trade back issues of *Railroad Magazine*, W&LE and SP tr. orders, etc. for material on WP.

Lt. RICHARD D. FULLERTON, Hdqt. ATSC, TSEP L-4G, Area B, Wright Field, Dayton, O., collects loco- and train-picture postage stamps from all lands; wants to hear from and trade with other hobbyists.

(R) W. E. GLOEB (UP conductor), Route 5, South Omaha 7, Neb., will sell size 616 engine pix, 18 for $1; UP emp. tts., 10c ea.; 2 pass. uniform caps, $1.25 ea.; copies of *Railroad Magazine*, '35 to date, 15c each.

J. R. GORHAM, Laplata, Mo., will sell old steam engine and thresher catalogs, 1906-'7-'8, good cond.

(R*) BOB HEGLUND, 1213 Grant St., Waukesha, Wis., wants *Railroad Magazine*, April '43, good cond.; also pix of interurbans, esp. old eqpmt.

(R) PAUL L. HENCHEY, 1190 Haight St., San Francisco 17, Calif., will pay 50c ea. for *Railroad Magazine*: Jan., Mar., Apr., Aug., Oct., '30; Feb., Apr., June, Aug. '31; Feb. '32; Oct. '33; Jan., Mar., Oct. '34; Jan., Apr. '37; all unclipped.

(R*) JOE H. HEYMANN, 141-25 Northern Blvd., Flushing, N.Y., wants all back issues of *Railroad Magazine* containing data on Brooklyn trolleys.

FRANK HILTZ, 90 Morris St., Halifax, Nova Scotia, wants pix of pullmans and dining-cars, esp. interiors.

(R*) JAMES D. HOLLAND, Box 105, Uncasville, Conn., wants pix of Conn. Ry., and Norwich & Westerly cars operated recently in eastern Conn. and western R.I.; also '44 copies of *Railroad Magazine*.

(*) Cpl. GEORGE E. HORN, 142 Blossom St., Leominster, Mass., wants 16 mm movie camera, scenes of former NYCTS 2nd Ave. el in war service at Richmond, Calif., and operation and demolition of New York City's 6th Ave. el.

(*) NORMAN HOLMES, 1254 E. William St., San Jose 12, Calif., will trade pix of Market St. Ry., San Francisco Municipal, Key System, Sacramento city lines, WP, SP, and abandoned cars of San Jose, Peninsular and other juice lines, esp. NWP, SN, P&SR, IER, CCT; also swaps tokens and transfers.

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(R) CHAS. L. HUGHES, Route 4, Perryville, Mo., will buy *Railroad Magazine*, Jan., Feb. '44; loco pix emp. tts. of West and Midwest roads, esp. Rock Island,

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BOB LA COSSE, 372 Fullerton Ave., Chicago 47, Ill., wants pix of steam or Diesel locos, any road, pref. Midwest. Send lists.

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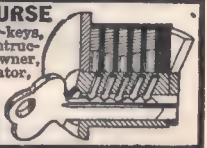

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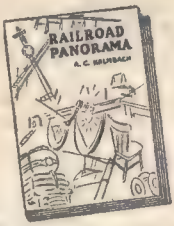

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cars now operating, or formerly run in Ga., Tenn., Alabama, esp. Atlanta or Chattanooga. Send lists.

(R) Lt. D. G. LeFEVER, Box 888, Alamo, Tex., wants most of issues of *Railroad Man's Magazine* between 1908-'19; will pay $1 ea., unclipped; 50c ea. for Dec. '29, all '30; and 30c ea. for first 7 issues of '31. Send lists.

(*) S. H. LEWIS, 12234 Steel Ave., Detroit 27, Mich., will buy size 116 pix clear side view of TAR cars operating between NYC and New Rochelle; New York & Stamford, between New Rochelle and Stamford; wants maps, pub. and emp. tts. of same lines.

(*) STUART A. LIEBMAN, 12028 Miranda St., North Hollywood, Calif., sells pix of Pacific Elec., Los Angeles and San Diego Ry., 5c ea. List and sample 10c. (*Editor asks: What size pix, Stuart?*)

(R) R. LINQUIST, Box 215, Bellaire, O., will sell *Railroad Magazine*, Apr. '39; Oct., Dec. '43; June, Aug.-Dec. '44. (*Editor's note: R. L., invalid for 6 years, wants to hear from other 20-year-olds.*)

(R) J. NORMAN LOWE, Box 62, Cochrane, Ont., Canada, will buy or trade T&NO pix for one copy of Nov. '39 *Railroad Magazine*, good cond. Wants size 616 or larger negs. of parlor cars. Write first.

(R*) WALTER G. McGAUGHEY, 437 W. 50th St., Los Angeles 37, Calif., wants emp. tts. LA Div. of UP, SP, Santa Fe. Will swap tts. of Pacific Elec. in L.A., transfers of 8 line LA Ry., or *Railroad Magazine*, Aug. '42, good cond.

(R) A. H. MacLELLAN, 101 Armadine St., Boston 24, Mass., will sell *Railroad Magazine*, '32 thru '43, good cond. Wants '29, '30, '31 copies; also info on two 15-inch gage English roads. Romney, Hythe & Dymchurch and Eskdale.

(*) JIM MALONEY Jr., 1414 S. Race St., Allentown, Pa., will sell or trade size 116 pix of LVT, P&W, PST, PTC. Send stamp for list. Wants steam pix, emp. tts., esp. Pennsy west of Harrisburg.

(R*) STANLEY MATAHANSKI, 597 Dudley St., Boston, Mass., will sell *Railroad Magazine*, Aug. '15; Sept., Dec. '16; from '36 to date, for best offer; or trade for elec. car pix.

(*) DON MATHER, 187 W. Sinclair St., Wabash, Ind., wants size 116 pix of Ind. Serv., N. Albany & Louisville, Sou Ind., Evansville & O. Valley; PCC cars any city; roster and info on P&W.

ROBT. B. MIDER, 4914 Eastren Ave., Cincinnati 26, O., will sell size 116 pix of Santa Fe, SP, CRT&P, B&O, Pennsy, etc. List for stamp.

(R) CHAS. A. MILLIKEN, 620 Madison St., Jackson, Mich., will sell *Railroad Magazine*, '30-'40; good cond.

GEO. MOCK, Jr., RFD 1, Box 205, Albany, Ga., will buy size 116 ACL loco pix and tr. orders; will trade few tts. State prices.

Sgt. TOM MULANIFF, 32931006, Co. C, 745th Rwy. Opr. Bn., APO 466, c/o Postmaster, New York City, wants to correspond with railroaders, both sexes. Is NYC ex-fireman; answers all mail.

R. T. NEWMAN, Paris, Ill., offers IC, N&W, MoP, L&N, Rdg., Katy, Erie and B&O employe mags., 10c ea.; also 9 large colored rr. calendar pix, $1 ea.

(R*) WM. PARKS, Jr., Box 73, Waukesha, Wis., will buy, sell or trade old *Railroad Magazines*, streetcar passes, transfers and rr. letterheads.

WM. E. PAUL, Box 439, Portage La Prairie, Manitoba, Canada, will trade size 116 CPR pix for other CPR pix; or sell 23 for $1, or 5c ea. Trades lists and samples.

TOM PEEBLES, Box 681, Stellarton, Nova Scotia, wants size 116 pix of steam engines and rr. scenery.

(R*) T. J. PELLETIER, Route 3, Box 89, Palouse, Wash., wants any size streetcar pix; also *Railroad Magazine*, Dec. '06 to Apr. '34, good cond. Quote prices.

(*) JAMES E. PLATT, 99 Mountain Park Ave., Hamilton, Ont., Canada, wants any size pix of CNR class D1a-b, D2a, D3a, D5a, all Mogul types. Will trade or sell size 616 pix of CNR, CPR, TH&B, and elec. lines.

(*) Mrs. WM. G. RATTLEY, 423 Locust St., Sausalito, Calif., will trade 5 streetcar or bus transfers of San Francisco and East Bay for 1 p.c. pic. of trains. (*Editor inquires: Trains on what roads, Mrs. Rattley?*)

"SAPPER," 56 Green Lane, Worchester Park, Surrey, England, collects and trades rr. and other picture postcards and stamps. (*Editor's note: Hereafter, use your real name here, "Sapper."*)

(*) GRANT B. SCHMALGEMEIER, 320 Mississippi St., Vallejo, Calif., collects U.S. and foreign streetcar and bus tokens; wants to hear from other hobbyists.

W. J. STEVENSON, Box 312, Walkerton, Ind., sells 8x10 pix of B&O, 5562 T-3s (front and side view) 25c ea.; other 3½x4½ pix of B&O 5555s; NYC 1800s; NKP 603-04-05-16; South Shore 6, 7, 10, 11, 13, 21, 31, 101, 103, 105, 503-04, 10c ea. State what you want, any size.

A.A. THIEME, 3905 Floyd Ave., Richmond 21, Va.,

offers size 116 prints RF&P, C&O, etc. Ask for list.

(*) R. VAN BUSKIRK, 120 Chestnut Ave., Jersey City, N.J., wants pix or negs. of N.J. trolleys, aban. lines; also copies *Street Ry. Journal*, 1905-'29. Pix to trade.

(*) BILL VIGRASS, 1494 Cohassett Ave., Lakewood 7, O., will trade size 116 pix of Cleveland Ry., Cleve. R.T., Ohio Pub. Serv., Youngstown & Suburban, Lakeside & Marblehead, few of aband. right-of-ways, for other juice lines. Trade list, or mail for stamp. Wants pix of scrapped Y&S cars.

L. D. WEBSTER, 124 Tomkins St., Cortland, N.Y., will sell emp. tts. or trade for *Trains*, Dec. '41; Feb., May, June '42; Jan. '43. Also, trade 1892 B&M emp. tt. for any other about same date.

DAVID J. WELCH, Box 396, Tracy, Calif., wants negs. of SP 3059, 4000, and 4001 as built, and as cab-in-front. Will trade negs. of SP and other roads.

(R) Cpl. A. G. WELLS 7266394, 64 Martyrs' Field Road, Canterbury, Kent, England, wants to buy *Railroad Magazine*, Oct. '40; Apr., Nov., Dec. '41; Apr. '43.

Pvt. MILTON W. WILLENSON 42061587, 547 Replacement Co., APO 781-R, c/o Postmaster New York City, will swap rr. pix taken in Italy for Amer. rr. pix.

(*) JOHN F. WISNOM, YMCA, Greenwich, Conn. will buy info., pix, maps, etc., on N.Y., Boston & Westchester; also paperweight engine model.

Model Trading Post

LISTINGS in this department are free for amateur hobbyists. They are published in good faith but without guarantee. Write plainly and keep 'em short. Use a separate sheet or card containing your name and address. Give your first name, not initial.

Because of time needed to edit, print and distribute this magazine, material must be sent to the Editor at least seven weeks before publication date. Redball handling is given to items we get the first week of each month, if accompanied by the latest Reader's Choice coupon (clipped from page or homemade). Address *Railroad Magazine*, 205 E. 42nd Street, New York City 17.

Due to scarcity of space, we prefer that no reader be listed here oftener than once in three months.

J. D. BAILEY, 937 N. 53rd St., Birmingham 6, Ala., wants 2 Hudson-type locos, any 072; will trade two new 224E and one 226 E, or buy.

JOHN BELL, 1508 Howard Ave., Harrisburg, Pa., wants 800 series Lionel frt. cars; 263E, 260E, 238E, 256 locos. Offers 224E loco; items 117, 98, 87, 164, 438; AF 596, 97, etc.

ROY BONN, Gervais, Ore., wants 0 gage loco and left or right switch. Likes to hear from other fans.

RAY W. BROWN, RFD 4, Box 68, Middletown, N.Y., wants machined or rough ½-in. scale castings and rail, or 0 gage T-rail used for tinplate rolling stock.

Pfc. R. B. BUNDREN, 34737527, Co. B, 132nd Inf., APO 716, c/o Postmaster, San Francisco, will buy Lionel loco and tender 225, 2235W tender, tender 224W, type 2 transf. 250 w., pass. 2624, frt. cars 2954-5-6.

E. M. COX, 4916 S. Crenshaw Blvd., Los Angeles, Calif., wants Buddy L 3¼-in. gage track and switches, or complete outfit incl. these. Will buy live-steam loco or steam traction engine. Trade late deluxe 8 tube G.M. car radio like new, cost $70.

W. M. DAVIS, 850 Lincoln Way, Valparaiso, Ind., will sell H0 locos and MV power trucks, from $12 to $75. Send for list.

CHAS. D. FORNEY, 1530 No. 28th, Lincoln, Neb., will repair engines and model eqpmt. (*Ed.*: *Charlie is veteran of this war, a model hobbyist since early* '30s.)

A. FRANCESCHETTI, 10 Downing St., New York 14, N.Y., will sell chemical apparatus and supplies, or trade for 027, 0 gage or Af locos, or motors with 6 or 8 drive wheels, any cond. if running. Send for list.

F. R. GUSTAFSON, (CN&M fireman), c/o H. Falkner,

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- How to locate defective soldered joints
- Inside story of carbon resistors
- Paper, electrlytic, mica, trimmer condensers
- Antenna, oscillator coil facts
- Power transformer: construction, possible troubles
- Installing power cord
- Tone controls
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Reader's Choice Coupon

Stories, features and department I like best in the April '45 issue are:

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2.....

3.....

4.....

5.....

6.....

Best photo is on page.....

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Railroad Magazine, 205 E. 42 St., New York City 17

Primitive Type of Brake

Old print, courtesy of C. L. Winey

In the earliest days of railroading, the first buffer brake used on a car wheel was a very simple device, but was an improvement on an even earlier type, namely, a piece of wooden rail tied to the coupling chain. The platform on which the brakeman stands prevented the cars from telescoping

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1010 W. State St., Rockford, Ill., wants Lionel loco 224, 225, or 226; good cond. Send price list.

E. B. KILLE, 8215 2nd Ave., Inglewood, Calif., will buy Ives, Lionel or AF locos, cars and track.

L. S. KROACK, 446 N. Broad St., Grove City, Pa., will trade Johnson Util-I-Motor (fractional h.p. gas to replace ¼ h.p. electric), Lionel and AF 0 gage switches and track, for std. gage loco and cars. Send list.

HAMILTON R. LARGE, 246 Park St., New Haven, Conn., will buy new or old double 0 gage rail, and locos. Write details.

CHAS. R. LEWIS, 29 Pratt Ave., Towanda, Pa., wants Lionel 2623, 2758, 2755, 2956, Flying Yankee or City of Denver cars; will sell 2 whistling units, 3-2613, 2614, 2615, 814, 814R, 815, 811, 2600 cars; pass. cars with elec. couplers; frt. have auto. couplers.

J. P. McHUGH, 6122 S. Sacramento St., Chicago 29, Ill., will sell car body assemblies, corrugated ends, trucks and couplers, misc. eqpmt.

A. E. McKEE, Box 45, Foster, Ky., will buy or trade for H0 eqpmt.; radio course to trade.

RICHARD G. MYERS, 74-11 Caldwell Ave., Maspeth, N.Y., will sell 0 and 027 gage eqpmt. and accessories, 1666 and 260E locos, 20 frt. cars, switches, track, transf. Write for list.

RALPH M. PERRY, 8 Vermont Ave., Brattleboro, N.H., offers 20 AF H0 cast frt. cars for sale or swap for 0 gage tinplate. List for stamp.

JOHN PITTALA, 80-33 88th Ave., Woodhaven, N.Y., wants H0 brass rail, r.c. switches, pass. and frt cars. Send list.

B. D. SHARPE, RD 1, Castleton, N.Y., will buy Marx, Lionel or AF eqpmt., track, switches, cars, loco 027 or 0 gage, any cond. if running. Send list.

M. W. REED, (SP engineer), 3400 8th Ave., Ft. Worth 4, Texas, will sell small amount tinplate eqpmt., four 0 gage cars, and H0 layout with 12 locos, cars, track, etc. Complete list for 10c.

R. VAN BUSKIRK, 120 Chestnut Ave., Jersey City, N.J., will sell, or trade for tinplate trolleys: pr. Lionel 021 switches; 020 crossing; 100 Lionel 0 gage curved track; 44 secs. 0 gage straight track, std. track, AFL 3177 obs., Lionel loco 248, etc. List for stamp.

J. W. WARD, GNR, Nakina, Ont., Canada, will buy any 0 gage eqpmt.

Lt. JOE C. WIDOWY, MDRP, ASFTC, Camp Berkeley, Texas, will sell Lionel std. locos, cars and track or trade for ¼-in. scale or H0.

Juicefan Trip April 8th

PHILADELPHIA CHAPTER of the National Railway Historical Society is having its first fan trip in over two years on Sunday, April 8th. A special car, one of the modernized 5200 series double-enders, will leave Pelham Barn, corner of Germantown Ave. and Carpenter Lane, at 11 A.M. for a 65-mile circle route covering Germantown, Frankford, Holmesburg, Tacony, Brideburg, Kensington, Fishtown, Brewerytown, Corktown, Paschalville and the Chester short line to Chester. An unusual stop for dinner will be made at the 'Penguin Flyer' where fans can have either dinner or lunch on a "streamlined train entering a Lionel tunnel." Some of the streetcar routes to be covered are slated for postwar bus and trolley bus conversion. For further information and tickets write Sydney S. Walker, Box 647, Crum Lynne, Pa.

The Chapter meets in the Serviceman's Canteen, Baltimore & Ohio Railroad Station, 24th and Chestnut Sts., Phila., on the third Thursday of each month at 8 P.M. Visitors are always welcome.

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